

LPDES PERMIT NO. LA0000761, AI No. 1255

LPDES FACT SHEET and RATIONALE
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

- I Company/Facility Name:** PPG Industries, Inc. Industrial Chemicals
Lake Charles Facility
Post Office Box 1000
Lake Charles, Louisiana 70602
- II Issuing Office:** Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
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Date Prepared: October 13, 2006. Revised on March 29, 2007.

IV Permit Action/Status:**A. Reason For Permit Action:**

Reissuance of an expired National Pollutant Discharge Elimination System (NPDES) permit for a five year term.

- * In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, and 405-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC Chapter 11) will not have dual references.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

- B. NPDES permit - NPDES permit effective date: January 1, 1987**
NPDES permit expiration date: December 31, 1991

PPG appealed the NPDES permit within the regulatory time frame. The appeal was settled through a permit modification and made effective on July 1, 1991. The modified permit expired on December 31, 1991.

* EPA has not retained enforcement authority*

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- C. LWDPS permit - LWDPS permit effective date: N/A
 LWDPS permit expiration date: N/A
- D. Application - The first application was submitted to EPA in 1991 with no action by EPA. An updated application was submitted to LDEQ in July 1997. A new application was received April 30, 2004 superseding the 1991 and 1997 submittals. Addendums to the 2004 LPDES permit application were received on February 25, 2005, February 10, 2006, August 31, 2006, December 19, 2006, February 8, 2007, and March 2, 2007.

V Facility Information:

- A. Location - 1300 PPG Drive in Lake Charles
- B. Applicant Activity -

According to the application, PPG Industries, Inc. Industrial Chemicals, Lake Charles Facility, is an organic and inorganic chemical production and silica production facility. Major products include organic chemicals, chlorine, caustic soda, various chlorinated solvents, and silica products. The facility consists of three highly integrated business units as described below.

Chlor/Alkali: In these areas of the Complex, chlorine, caustic, and hydrogen are produced through the electrolysis of brine using diaphragm, membrane, and mercury cell technology. Additionally, PPG manufactures anhydrous form of caustic soda bead, known as Pels®.

Derivatives: In this area, chlorine is combined with ethylene and ethylene derivatives to produce chlorinated hydrocarbons and muriatic acid (hydrochloric acid). Specific derivatives products include: vinyl chloride monomer, ethylene dichloride (EDC), Tri-Ethane® (1,1,1 trichloroethane), perchloroethylene, trichloroethylene, ethyl chloride, VeraTRANS™ (trans-1,2 dichloroethylene), and muriatic acid.

Silica Products: In this area, sand is heated with either caustic or soda ash to produce sodium silicate, from which different grades of products are produced.

PPG Industries proposes to remediate the lower PPG Canal and portions of Bayou D'Inde. As a result of remediation activities, PPG proposes to relocate Outfall 001 from its current location of discharge into Bayou D'Inde to the Main Stem of the Calcasieu River.

PPG Industries has also committed to decommissioning their existing mercury cell unit and replacing it with a membrane technology unit. This new unit is proposed to come on-line in mid-2007. Once the membrane unit completes shakedown, the mercury cell chlorine production operations will be shut down (i.e. both units will not run concurrently). The Mercury Recovery Unit (MRU) which is used to recycle mercury containing materials to recover mercury for reuse will continue to be operated through the decommissioning process as long as recoverable levels of mercury can be achieved. In addition, storage vessels for storing recovered mercury for subsequent sale will be operated. Available tankage will be used to store potentially contaminated water (associated with decommissioning, stormwater runoff, etc) for processing through the mercury wastewater treatment system. The mercury wastewater treatment system will continue to operate even if the MRU is taken offline.

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- C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401-402, and 404-471 have been adopted by reference at LAC 33:IX.4903)

Guideline

Organic Chemicals, Plastics,
 and Synthetic Fibers

Reference

40 CFR 414
 Subparts (F, G, and I)

Inorganic Chemicals-
 Chlor Alkali

40 CFR 415.60
 Subpart F

Daily Production - While the Mercury Cell Unit is in Operation

Outfall 10A Mercury Cell Process - 1,414 Klbs/day
 Outfall 10A Diaphragm Cell Process - 2,246 Klbs/day
 Outfall 20A Diaphragm Cell Process - 3,642 Klbs/day

Daily Production - During the Mercury Cell Closure Transition Phase

Outfall 10B & 101 Diaphragm Cell Process - 2,246 Klbs/day
 Outfall 20A & 201 Diaphragm Cell Process - 3,642 Klbs/day
 Outfall 10B & 101 Membrane Cell Process
 (BPJ as Diaphragm Cell Process) - 1,642 Klbs/day

Outfall 10B and 101 Mercury Cell Closure(*) (BPJ) - 1,414 Klbs/day

- (*) The mercury cell chlor-alkali production equipment is being replaced by membrane technology. During the decommissioning of the mercury cell, PPG proposes to recycle mercury containing materials to recover the mercury for re-use. It is anticipated that mercury levels will decrease and eventually cease once decommissioning of the mercury cell is complete. Therefore, allocation has been included for the mercury cell process during this time based on Best Professional Judgment (BPJ).

Other sources of technology based limits:

LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).
 Multi-Sector General Permit for Industrial Stormwater Discharges, LAR050000.
 Best Professional Judgement

- D. Fee Rate -
 1. Fee Rating Facility Type: Major
 2. Complexity Type: V
 3. Wastewater Type: II
 4. SIC code: 2812, 2869, and 2816
- E. Continuous Facility Effluent Flow - Max 30-Day, 221.1 MGD.

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VI Receiving Waters: local drainage, thence to Bayou D'Inde (Proposed Outfalls A01, B01, 10A, 10B, 20A, and 30A), the Calcasieu Ship Canal (Outfall 002), Bayou Verdine via the Olin ditch (Outfall 004), and local drainage, thence to the Main Channel of the Calcasieu River (Proposed relocation of Outfall 001).

Bayou D'Inde (Existing Outfall Location - A01 and B01)

1. TSS (15%), mg/L: 9.65
2. Average Hardness, mg/L CaCO_3 : 888.08
3. Critical Flow, cfs: 121
4. Mixing Zone Fraction: 1/3
5. Harmonic Mean Flow, cfs: 363
6. River Basin: Calcasieu River, Segment No. 030306 and 030901
7. Designated Uses:

The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation.

Calcasieu River (Proposed New Outfall 001 Location & Outfall 002)

1. TSS (15%), mg/L: 10.5
2. Average Hardness, mg/L CaCO_3 : 977.65
3. Critical Flow, cfs: 1208
4. Mixing Zone Fraction: 1/3
5. Harmonic Mean Flow, cfs: 3624
6. River Basin: Calcasieu River, Segment No. 030301
7. Designated Uses:

The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation.

Bayou Verdine (Outfall 004)

1. TSS (15%), mg/L: 10.98
2. Average Hardness, mg/L CaCO_3 : 1578.73
3. Critical Flow, cfs: 4.84
4. Mixing Zone Fraction: 1
5. Harmonic Mean Flow, cfs: 14.52
6. River Basin: Calcasieu River, Segment No. 030306
7. Designated Uses:

The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation.

Information based on the following: Water Quality Management Plan, Volume 5A, 1994; LAC 33:IX Chapter 11;/Recommendation(s) from the Engineering Section. Hardness and 15% TSS data listed in Hardness and TSS Data for All LDEQ Ambient Stations for the Period of Record as of March 1998, LeBlanc. This information was included in a memorandum from Brian Baker to Jennifer Sheppard, dated April 24, 2006.

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VII Outfall Information:

Outfall A01 - Phases I, II, & III (Existing Location in Bayou D'Inde)

- A. Type of wastewater A01 - the discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; and discharges from Internal Outfalls 10A, 20A, and 30A.
- B. Location - at the point of discharge from Mobile Bridge No. 1, prior to combining with any other wastewaters and/or the waters of Bayou D'Inde, at Latitude 30°12'34", Longitude 93°17'36".

Flow Location No. 1 - PPG Canal approximately 150 feet upstream of flow retention weir (300 yards upstream from Mobile Bridge No. 1).

Flow Location No. 2 - Southwest corner of the South Terminal Area. Discharges into the PPG Canal approximately 150 feet upstream of Mobile Bridge No. 1.

Alternate Sample Locations(*) (For use during remediation activity only)

Alternate Location 1 - at the point of discharge from the sonar platform upstream of the weir on the discharge canal (Latitude 30° 12' 56", Longitude 93° 17" 18"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

Alternate Location 2 - at the point of discharge from the salvage yard wood bridge (Latitude 30° 13' 11", Longitude 93° 17" 05"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

Alternate Location 3 - at the point of discharge from pH probe wood platform near the neutralization tanks at Outfall A01 (Latitude 30° 13' 20", Longitude 93° 17" 06"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

Alternate Location 4 - at the point of discharge from the riverside canal steel platform (Latitude 30° 13' 16", Longitude 93° 16" 53"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

- (*) PPG shall use the furthest downstream alternate sampling location that is outside the influence of the remediation activity.

- C. Treatment - treatment of process wastewaters consists of:
-pH adjustment in the PPG Canal

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Once Through Non-Contact Cooling Water:

- Chlorination of incoming water

Cooling Tower Blowdown:

- Non-heavy metal treatment systems or low zinc treatment systems
- Purification of incoming water

pH Control Agents Consisting of NaOH and HCL:

- Neutralization

Sanitary Wastewater:

- Portion to anaerobic digestion
- Portion to a mechanical aerated sludge system

Non-Process Effluents - deionization unit regeneration:

- Neutralization

Effluent from Neighboring Industries:

- No treatment by PPG Industries

D. Flow - Continuous Flow 172.1765 MGD, Max 30 Day Flow 221.1 MGD.

Process Wastewater*	15.0768 MGD
Utility Wastewater*	122.508 MGD
Miscellaneous Wastewater*	34.5341 MGD
Sanitary Wastewater*	0.0576 MGD

* Specific component waste streams are defined at Appendix A-1.

E. Receiving waters - local drainage, thence to PPG Canal, thence to Bayou D'Inde

F. Basin and segment - Calcasieu River Basin, Segment 030901

Outfall B01 - Phases I, II, & III (Existing Location in Bayou D'Inde)

- A. Type of wastewater B01 - the discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; sulfuric acid stripper water; evaporator area pump seal water; HCL area pump seal water; and discharges from Internal Outfalls 10B, 20A, and 30A.

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- B. Location - at the point of discharge from Mobile Bridge No. 1, prior to combining with any other wastewaters and/or the waters of Bayou D'Inde, at Latitude 30°12'34", Longitude 93°17'36".

Flow Location No. 1 - PPG Canal approximately 150 feet upstream of flow retention weir (300 yards upstream from Mobile Bridge No. 1).

Flow Location No. 2 - Southwest corner of the South Terminal Area. Discharges into the PPG Canal approximately 150 feet upstream of Mobile Bridge No. 1.

Alternate Sample Locations(*) (For use during remediation activity only)

Alternate Location 1 - at the point of discharge from the sonar platform upstream of the weir on the discharge canal (Latitude 30° 12' 56", Longitude 93° 17" 18"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

Alternate Location 2 - at the point of discharge from the salvage yard wood bridge (Latitude 30° 13' 11", Longitude 93° 17" 05"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

Alternate Location 3 - at the point of discharge from pH probe wood platform near the neutralization tanks at Outfall B01 (Latitude 30° 13' 20", Longitude 93° 17" 06"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

Alternate Location 4 - at the point of discharge from the riverside canal steel platform (Latitude 30° 13' 16", Longitude 93° 16" 53"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

- (*) PPG shall use the furthest downstream alternate sampling location that is outside the influence of the remediation activity.

- C. Treatment - treatment of process wastewaters consists of:
-pH adjustment

Treatment - treatment of process wastewaters from the Mercury Recovery Unit (MRU):
-Mercury wastewater treatment system

Once Through Non-Contact Cooling Water:
-Chlorination of incoming water

Cooling Tower Blowdown:
-Non-heavy metal treatment systems or low zinc treatment systems
-Purification of incoming water

pH Control Agents Consisting of NaOH and HCL:
-Neutralization

Sanitary Wastewater:
-Portion to anaerobic digestion
-Portion to a mechanical aerated sludge system

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Non-Process Effluents - deionization unit regeneration:
 -Neutralization

Effluent from Neighboring Industries:
 -No treatment by PPG Industries

D. Flow - Continuous Flow 172.2773 MGD, Max 30 Day Flow 221.1 MGD.

Process Wastewater*	15.1776 MGD
Utility Wastewater*	122.508 MGD
Miscellaneous Wastewater*	34.5341 MGD
Sanitary Wastewater*	0.0576 MGD

* Specific component waste streams are defined at Appendix A-2.

E. Receiving waters - local drainage, thence to PPG Canal, thence to Bayou D'Inde

F. Basin and segment - Calcasieu River Basin, Segment 030901

Outfall 001 - Phases I, II, & III (Proposed New Location in the Main Stem of the Calcasieu River)

A. Type of wastewater - the discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; sulfuric acid stripper water; evaporator area pump seal water; HCL area pump seal water; and discharges from Internal Outfalls 101, 201, and 301.

B. Location - at the point of discharge from Mobile Bridge No. 1, prior to combining with any other wastewaters and/or the waters of the Main Stem of the Calcasieu River, at Latitude 30°12'49", Longitude 93°17'15".

Flow Location No. 1 - PPG Canal approximately 150 feet upstream of flow retention weir (300 yards upstream from Mobile Bridge No. 1).

Flow Location No. 2 - Southwest corner of the South Terminal Area. Discharges into the PPG Canal approximately 150 feet upstream of Mobile Bridge No. 1.

Alternate Sample Locations(*) (For use during remediation activity only)

Alternate Location 1 - at the point of discharge from the sonar platform upstream of the weir on the discharge canal (Latitude 30° 12' 56", Longitude 93° 17' 18"), prior to combining with any other wastewaters and/or the waters of the Main Stem of the Calcasieu River.

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Alternate Location 2 - at the point of discharge from the salvage yard wood bridge (Latitude 30° 13' 11", Longitude 93° 17" 05"), prior to combining with any other wastewaters and/or the waters of the Main Stem of the Calcasieu River.

Alternate Location 3 - at the point of discharge from pH probe wood platform near the neutralization tanks at Outfall 001 (Latitude 30° 13' 20", Longitude 93° 17" 06"), prior to combining with any other wastewaters and/or the waters of the Main Stem of the Calcasieu River.

Alternate Location 4 - at the point of discharge from the riverside canal steel platform (Latitude 30° 13' 16", Longitude 93° 16" 53"), prior to combining with any other wastewaters and/or the waters of the Main Stem of the Calcasieu River.

(*) PPG shall use the furthest downstream alternate sampling location that is outside the influence of the remediation activity.

- C. Treatment - treatment of process wastewaters consists of:
 -pH adjustment

Treatment - treatment of process wastewaters from the Mercury Recovery Unit (MRU):
 -Mercury wastewater treatment system

Once Through Non-Contact Cooling Water:
 -Chlorination of incoming water

Cooling Tower Blowdown:
 -Non-heavy metal treatment systems or low zinc treatment systems
 -Purification of incoming water

pH Control Agents Consisting of NaOH and HCL:
 -Neutralization

Sanitary Wastewater:
 -Portion to anaerobic digestion
 -Portion to a mechanical aerated sludge system

Non-Process Effluents - deionization unit regeneration:
 -Neutralization

Effluent from Neighboring Industries:
 -No treatment by PPG Industries

- D. Flow - Continuous Flow 172.2773 MGD, Max 30 Day Flow 221.1 MGD.

Process Wastewater*	15.1776 MGD
Utility Wastewater*	122.508 MGD
Miscellaneous Wastewater*	34.5341 MGD
Sanitary Wastewater*	0.0576 MGD

* Specific component waste streams are defined at Appendix A-2.

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- E. Receiving waters - local drainage, thence to PPG Canal, thence to the Main Stem of the Calcasieu River
- F. Basin and segment - Calcasieu River Basin, Segment 030301

Internal Outfall 10A - Phases I & II (while the Mercury Cell Process is in Operation)

- A. Type of wastewater - the discharge of trace contamination process wastewater, treated process wastewater and stormwater from Mercury Cell Chlor/Alkali production facilities including cell room water, seal water, brine treatment solids, and brine purges; process wastewater from the mercury cell process trace including chlorinated condensate, spent sulfuric acid, chlorine seal water, and spent neutralizer caustic and hypochlorite; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; brine solid treatment portion of Plant A; once through non-contact cooling water; and low contamination potential stormwater runoff.
- B. Location - Discharge to the PPG Canal via Final Outfall A01, thence to Bayou D'Inde at Latitude 30°12'34", Longitude 93°17'36".

Sample Locations 1 - 4:

Sample Location Number 1 - at the main Plant A discharge line located 40 feet ESE of the acid/caustic addition tanks for Final Outfall A01 neutralization on the east side of the PPG Canal approximately 70 feet south of Avenue Q (Latitude 30°13'20", Longitude 93°17'04") and after the commingling of discharges from the asbestos treatment facility, the chlorine rail car and storage hydrostatic test water collection line, the Primary Plant chlor-alkali wastewater collection systems, and from Sample Location Numbers 2 and 3.

Sample Location Number 2 - at the discharge of the trace mercury sewer system located at the SE corner of the mercury cell brine spill sump (swimming pool) about 120 feet SW of the corner of 8th Street and Avenue M (Latitude 30°13'26", Longitude 93°17'01"). The sample is to be taken prior to commingling with Sample Location Number 3 discharges.

Sample Location 3 - at the discharge of the mercury cell wastewater treatment facility located at the North West corner of the mercury cell carbon bed filters pad approximately 70 feet South West of the corner of 8th Street and Avenue M (Latitude 30°13'26", Longitude 93°17'02"). The sample is to be taken prior to commingling with discharges at Sample Location 2.

Sample Location 4 - at the discharge of the Plant A brine solids treatment facility located approximately 30 feet South West of the Brine Treatment North Clarifier, and approximately 20 feet North West of the Brine Treatment South Accelerator (Latitude 30°13'36", Longitude 93°17'01"). The sample should be taken prior to commingling with any other stream. It should be noted that while Sample Location 4 discharges do commingle with various Plant

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A non-process wastewater discharges, Sample Location 4 discharges do not commingle with discharges from Sample Locations 1, 2, and 3 prior to discharge into the PPG Canal.

C. Treatment - treatment consists of:

Process Wastewater from Plant A Brine Solids Treatment

-Brine solids are dissolved by adding hydrochloric acid

Mercury Cell Process Wastewater (Mercury Trace)

-Mercury Treatment

-Sulfide Filtration

-Carbon Filtration

Process Wastewater from Diaphragm Cell Portion of Plant A (Chlorinated Condensate)

-Steam Stripper and $\text{Na}_2\text{S}_2\text{O}_3$ or SO_2 or equivalent addition

Process Wastewater from Diaphragm Cell Portion of Plant A

-Chlorine Removal

Process Wastewater from Mercury Cell Portion of Plant A

-No Treatment

Once through non-contact cooling water from the Diaphragm cells

-No Treatment

Asbestos-Bearing Process Wastewater

-Asbestos filter

Mercury Cell Chlor/Alkali Production Facility Wastewater

-Chemical precipitation

-Carbon adsorption

-Pressure Filtration

****Solids are sent for offsite disposal****

D. Flow - Continuous Flow 3.0168 MGD.

Process Wastewater*	2.4408 MGD
Utility Wastewater*	0.5760 MGD

* Specific component waste streams are defined at Appendix A-3.

E. Receiving waters - local drainage, thence to Bayou D'Inde via Final Outfall A01.

F. Basin and segment - Calcasieu River Basin, Segment 030901

Internal Outfall 10B - Phases I & II (Mercury Cell Closure In Transition)

A. Type of wastewater - the discharge of wastewater from the decommissioning of the Mercury Cell and associated activities; process wastewater from Membrane Cell portion of Plant A including HCL tank vent scrubber effluent, acid and soda ash storage areas process

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wastewater, and wastewater from the sulfuric acid stripper, membrane cell room floor drains, and pump seal water from evaporator or HCL area; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; process wastewater from brine solid treatment portion of Plant A; once through non-contact cooling water from Diaphragm Cells; and low contamination potential stormwater runoff.

- B. Location - Discharge to the PPG Canal via Final Outfall B01, thence to Bayou D'Inde at Latitude 30°12'34", Longitude 93°17'36".

Sample Locations 1 - 4:

Sample Location Number 1 - at the main Plant A discharge line located 40 feet ESE of the acid/caustic addition tanks for Final Outfall B01 neutralization on the east side of the PPG Canal approximately 70 feet south of Avenue Q (Latitude 30°13'20", Longitude 93°17'04") and after the commingling of discharges from the asbestos treatment facility, the chlorine rail car and storage hydrostatic test water collection line, the Primary Plant chlor-alkali wastewater collection systems, and from Sample Location Numbers 2 and 3.

Sample Location Number 2 - at the discharge of the trace mercury sewer system located at the SE corner of the mercury cell brine spill sump (swimming pool) about 120 feet SW of the corner of 8th Street and Avenue M (Latitude 30°13'26", Longitude 93°17'01") . The sample is to be taken prior to commingling with Sample Location Number 3 discharges.

Sample Location 3 - at the discharge of the mercury cell wastewater treatment facility located at the North West corner of the mercury cell carbon bed filters pad approximately 70 feet South West of the corner of 8th Street and Avenue M (Latitude 30°13'26", Longitude 93°17'02"). The sample is to be taken prior to commingling with discharges at Sample Location 2.

Sample Location 4 - at the discharge of the Plant A brine solids treatment facility located approximately 30 feet South West of the Brine Treatment North Clarifier, and approximately 20 feet North West of the Brine Treatment South Accelerator (Latitude 30°13'36", Longitude 93°17'01"). The sample should be taken prior to commingling with any other stream. It should be noted that while Sample Location 4 discharges do commingle with various Plant A non-process wastewater discharges, Sample Location 4 discharges do not commingle with discharges from Sample Locations 1, 2, and 3 prior to discharge into the PPG Canal.

- C. Treatment - treatment consists of:

Process Wastewater from Plant A Brine Solids Treatment
-Brine solids are dissolved by adding hydrochloric acid

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Mercury Cell Decommissioning Wastewater (Mercury Trace)

- Mercury Treatment
- Sulfide Filtration
- Carbon Filtration

Process Wastewater from Diaphragm Cell Portion of Plant A (Chlorinated Condensate)

- Steam Stripper and $\text{Na}_2\text{S}_2\text{O}_3$ or SO_2 or equivalent addition

Process Wastewater from Diaphragm Cell Portion of Plant A

- Chlorine Removal

Process Wastewater from Membrane Cell Portion of Plant A

- No Treatment

Once through non-contact cooling water from the Diaphragm cells

- No Treatment

Asbestos-Bearing Process Wastewater

- Asbestos filter

Mercury Cell Chlor/Alkali Decommissioning Activity Wastewater

- Steam Stripper and $\text{Na}_2\text{S}_2\text{O}_3$ or SO_2 or equivalent addition

D. Flow - Continuous Flow 3.1176 MGD.

Process Wastewater*	2.5416 MGD
Utility Wastewater*	0.5760 MGD

* Specific component waste streams are defined at Appendix A-4.

E. Receiving waters - local drainage, thence to Bayou D'Inde via Final Outfall B01.

F. Basin and segment - Calcasieu River Basin, Segment 030901

Internal Outfall 101 - Phases I & II (Mercury Cell Closure In Transition)

- A. Type of wastewater - the discharge of wastewater from the decommissioning of the Mercury Cell and associated activities; process wastewater from Membrane Cell portion of Plant A including HCL tank vent scrubber effluent, acid and soda ash storage areas process wastewater, and wastewater from the sulfuric acid stripper, membrane cell room floor drains, and pump seal water from evaporator or HCL area; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; process wastewater from brine solid treatment portion of Plant A; once through non-contact cooling water from Diaphragm Cells; and low contamination potential stormwater runoff.

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- B. Location - Discharge to the PPG Canal via Final Outfall 001, thence to the Main Stem of the Calcasieu River at Latitude 30°12'34", Longitude 93°17'36".

Sample Locations 1 - 4:

Sample Location Number 1 - at the main Plant A discharge line located 40 feet ESE of the acid/caustic addition tanks for Final Outfall 001 neutralization on the east side of the PPG Canal approximately 70 feet south of Avenue Q (Latitude 30°13'20", Longitude 93°17'04") and after the commingling of discharges from the asbestos treatment facility, the chlorine rail car and storage hydrostatic test water collection line, the Primary Plant chlor-alkali wastewater collection systems, and from Sample Location Numbers 2 and 3.

Sample Location Number 2 - at the discharge of the trace mercury sewer system located at the SE corner of the mercury cell brine spill sump (swimming pool) about 120 feet SW of the corner of 8th Street and Avenue M (Latitude 30°13'26", Longitude 93°17'01") . The sample is to be taken prior to commingling with Sample Location Number 3 discharges.

Sample Location 3 - at the discharge of the mercury cell wastewater treatment facility located at the North West corner of the mercury cell carbon bed filters pad approximately 70 feet South West of the corner of 8th Street and Avenue M (Latitude 30°13'26", Longitude 93°17'02"). The sample is to be taken prior to commingling with discharges at Sample Location 2.

Sample Location 4 - at the discharge of the Plant A brine solids treatment facility located approximately 30 feet South West of the Brine Treatment North Clarifier, and approximately 20 feet North West of the Brine Treatment South Accelerator (Latitude 30°13'36", Longitude 93°17'01"). The sample should be taken prior to commingling with any other stream. It should be noted that while Sample Location 4 discharges do commingle with various Plant A non-process wastewater discharges, Sample Location 4 discharges do not commingle with discharges from Sample Locations 1, 2, and 3 prior to discharge into the PPG Canal.

- C. Treatment - treatment consists of:

Process Wastewater from Plant A Brine Solids Treatment

- Brine solids are dissolved by adding hydrochloric acid

Mercury Cell Decommissioning Wastewater (Mercury Trace)

- Mercury Treatment
- Sulfide Filtration
- Carbon Filtration

Process Wastewater from Diaphragm Cell Portion of Plant A (Chlorinated Condensate)

- Steam Stripper and Na₂S₂O₃ or SO₂ or equivalent addition

Process Wastewater from Diaphragm Cell Portion of Plant A

- Chlorine Removal

Process Wastewater from Membrane Cell Portion of Plant A

- No Treatment

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Once through non-contact cooling water from the Diaphragm cells
-No Treatment

Asbestos-Bearing Process Wastewater
-Asbestos filter

Mercury Cell Chlor/Alkali Decommissioning Activity Wastewater
-Steam Stripper and $\text{Na}_2\text{S}_2\text{O}_3$ or SO_2 or equivalent addition

D. Flow - Continuous Flow 3.1176 MGD.

Process Wastewater*	2.5416 MGD
Utility Wastewater*	0.5760 MGD

* Specific component waste streams are defined at Appendix A-4.

E. Receiving waters - local drainage, thence to the Main Stem of the Calcasieu River via Final Outfall 001.

F. Basin and segment - Calcasieu River Basin, Segment 030301.

Internal Outfall 20A - Phase I & II (Bayou D'Inde Location)

- A. Type of wastewater - the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.
- B. Location - Discharge to the PPG Canal via Final Outfall A01 or B01, thence to Bayou D'Inde, at Latitude 30°13'22", Longitude 93°17'08".

Sample Locations 1 -2:

Sample Location Number 1 - at the discharge of the treated Plants B and C process wastewater after the mix tanks and chemical addition at Latitude 30°13'22", Longitude 93°17'08".

Sample Location Number 2 - at the discharge of the Plant B metals treatment facility and the WTU steam stripper(s) prior to commingling with any other streams at Latitude 30°13'27", Longitude 93°17'14".

C. Treatment - treatment consists of:

Plant A process wastewater:
-Plant A electrolyzer stripped chlorinated condensate

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OHC-EDC process wastewater and process area stormwater:

- Steam stripping
- Metals removal
- Filtration
- Carbon adsorption

Per-Tri Aqueous Phase:

- Steam strippers
- Metals removal

Incinerator and Halogenated Acid Furnace Wastewater:

- Chemical dechlorination
- Metals removal
- Filtration
- Carbon adsorption

Recovered Groundwater and Plant B Process Wastewater:

- Filtration
- Steam strippers
- Sand filtration
- Carbon Adsorption

Other Recovered Groundwater:

- Air stripper
- Carbon filtration

Brine Treatment Solids:

- Dissolved by HCL

Chlorine Header Seal Water, Emergency Chlorine Neutralizer:

- $\text{Na}_2\text{S}_2\text{O}_3$ or SO_2 or Equivalent

Stripped Chlorinated Condensate, and Spent Sulfuric Acid from Plant B:

- Filtration
- Steam Stripping
- Carbon adsorption

Stripped Chlorinated Condensate, and Spent Sulfuric Acid from Plant C:

- Steam stripping
- $\text{Na}_2\text{S}_2\text{O}_3$ or SO_2 or Equivalent

D. Flow - Continuous Flow 14.6808 MGD.

OCPSPF Process Wastewater*	1.8576 MGD
Non-process Area Wastewater*	10.2024 MGD
Inorganic Wastewater*	2.6208 MGD

* Specific component waste streams are defined at Appendix A-5.

E. Receiving waters - local drainage, thence to Bayou D'Inde via Final Outfall A01 or B01.

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F. Basin and segment - Calcasieu River Basin, Segment 030901

Internal Outfall 201 - Phase I & II (When Outfall 001 is Discharging to the Main Stem of the Calcasieu River)

- A. Type of wastewater - the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.
- B. Location - Discharge to the PPG Canal via Final Outfall 001, thence to the Main Stem of the Calcasieu River, at Latitude 30°13'22", Longitude 93°17'08".

Sample Locations 1 -2:

Sample Location Number 1 - at the discharge of the treated Plants B and C process wastewater after the mix tanks and chemical addition at Latitude 30°13'22", Longitude 93°17'08".

Sample Location Number 2 - at the discharge of the Plant B metals treatment facility and the WTU steam stripper(s) prior to commingling with any other streams at Latitude 30°13'27", Longitude 93°17'14".

C. Treatment - treatment consists of:

Plant A process wastewater:

- Plant A electrolyzer stripped chlorinated condensate

OHC-EDC process wastewater and process area stormwater:

- Steam stripping
- Metals removal
- Filtration
- Carbon adsorption

Per-Tri Aqueous Phase:

- Steam strippers
- Metals removal

Incinerator and Halogenated Acid Furnace Wastewater:

- Chemical dechlorination
- Metals removal
- Filtration
- Carbon adsorption

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Recovered Groundwater and Plant B Process Wastewater:

- Filtration
- Steam strippers
- Sand filtration
- Carbon Adsorption

Other Recovered Groundwater:

- Air stripper
- Carbon filtration

Brine Treatment Solids:

- Dissolved by HCL

Chlorine Header Seal Water, Emergency Chlorine Neutralizer:

- $\text{Na}_2\text{S}_2\text{O}_3$ or SO_2 or Equivalent

Stripped Chlorinated Condensate, and Spent Sulfuric Acid from Plant B:

- Filtration
- Steam Stripping
- Carbon adsorption

Stripped Chlorinated Condensate, and Spent Sulfuric Acid from Plant C:

- Steam stripping
- $\text{Na}_2\text{S}_2\text{O}_3$ or SO_2 or Equivalent

D. Flow - Continuous Flow 14.6808 MGD.

OCPSF Process Wastewater*	1.8576 MGD
Non-process Area Wastewater*	10.2024 MGD
Inorganic Wastewater*	2.6208 MGD

* Specific component waste streams are defined at Appendix A-5.

E. Receiving waters - local drainage, thence to the Main Stem of the Calcasieu River via Final Outfall 001.

F. Basin and segment - Calcasieu River Basin, Segment 030301

Internal Outfall 30A (Bayou D'Inde Location)

- A. Type of wastewater - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment).
- B. Location - at the point of discharge from the outlet pipe on the south end of the brick/concrete sump at the south end of 13th Street and approximately 65 feet east of the North East end of the Sabine River Water Pond at Latitude 30°13'25", Longitude 93°17'09"
- C. Treatment - None
- D. Flow - Intermittent

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- E. Receiving waters - local drainage, thence to PPG Canal, thence to Bayou D'Inde via Final Outfall A01 or B01.
- F. Basin and segment - Calcasieu River Basin, Segment 030901.

Internal Outfall 301 (When Outfall 001 is Discharging to the Main Stem of the Calcasieu River)

- A. Type of wastewater - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment).
- B. Location - at the point of discharge from the outlet pipe on the south end of the brick/concrete sump at the south end of 13th Street and approximately 65 feet east of the North East end of the Sabine River Water Pond Latitude 30°13'25", Longitude 93°17'09"
- C. Treatment - None
- D. Flow - Intermittent
- E. Receiving waters - local drainage, t thence to PPG Canal, thence to the Main Stem of the Calcasieu River via Final Outfall 001.
- F. Basin and segment - Calcasieu River Basin, Segment 030301.

Outfall 002

- A. Type of wastewater - the discharge of stormwater runoff from Plant A; steam condensate from Diaphragm Cell Chlor/Alkali production (Plant A); once through non-contact cooling water from Plant A; treated bilge water from barge transport vehicle; potential groundwater intrusion; and intermittent discharges of firewater and from condensate piping.
- B. Location - at the point of discharge at the overflow pipe from the weir located approximately 120 feet SW of the North Dock Storage Tank VC-3 on the north side of the first street near the chlorine caustic loading dock at Latitude 30°13'26", Longitude 93°16'41".
- C. Treatment - treatment consists of:
-Oil/Water separator
- D. Flow - Intermittent, 0.53712 MGD.
- E. Receiving waters - the Calcasieu Ship Canal
- F. Basin and segment - Calcasieu River Basin, Segment 030301

Outfall 004

- A. Type of wastewater - the discharge of once though non-contact cooling water from Plant A chlorine/caustic facility; wash down from car including car wash; cooling tower blowdown; intermittent discharges from condensate piping and acid tank scrubber discharge; and storm water runoff from caustic storage, chlorine liquefaction, and brine treatment areas.

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- B. Location - at the point of discharge approximately 300 feet **NE** of the North Dock Caustic Tank 109 and approximately 225 feet east of 2nd Street **outside** the eastern PPG perimeter fence at Latitude 30°13'40", Longitude 93°16'46".
- C. Treatment - for entire outfall consists of:
 - Neutralization

Treatment of wash down wastewater consists of:

 - Oil/Water Separator
- D. Flow - Continuous Flow 41.7 MGD (Max 30 Day).
- E. Receiving waters - local drainage, thence to Bayou Verdine **via** the Olin ditch
- F. Basin and segment - Calcasieu River Basin, Segment 030306

VIII Proposed Permit Limits:

The specific effluent limitations and/or conditions will be found in the **draft** permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale **section** below.

Summary of Proposed Changes From the Current Modified NPDES Permit:

- A. PPG Industries proposes to remediate the lower PPG Canal **and** portions of Bayou D'Inde. As a result of remediation activities, PPG proposes to relocate Outfall 001 from its current location of discharge into Bayou D'Inde to the Main Stem of **the** Calcasieu River.

PPG Industries has also committed to decommissioning their **existing** mercury cell unit and replacing it with a membrane technology unit. This new unit **is** proposed to come on-line in mid-2007. Once the membrane unit completes shakedown, the mercury cell chlorine production operations will be shut down (i.e. both units **will** not run concurrently). The Mercury Recovery Unit (MRU) which is used to recycle **mercury** containing materials to recover mercury for reuse will continue to be operated **through** the decommissioning process as long as recoverable levels of mercury can be achieved.

The outfall relocation and the mercury cell closure project, **coupled** with TMDL requirements, will affect the numbering designation of Outfalls 001, **101**, 201, and 301. New outfall designations are described with the associated outfall within **this** section.

- B. Outfalls A01, B01, and 001 - Outfalls A01 and B01 are the **same** outfall as 001, but are given different outfall designators due to the relocation of **the** outfall, multiple operational phases, and the different limitations assigned to each **operational** phase. Outfall A01 and B01 will represent operating scenarios at the Bayou D'Inde **location** (current location) and 001 will represent scenarios for the proposed new outfall **location** on the Main Stem of the Calcasieu River. This will aide LDEQ's Compliance Group **and** ensure that the correct Discharge Monitoring Reports (DMRs) are submitted to this **Office**. Currently, this facility has 9 scenarios for discharge limitations under Outfalls A01, B01, **and** 001. These are as follows:

Outfall A01 Phase I - This schedule will be used in **the current outfall location**. It covers the period from the effective date of the **permit** (while the **mercury cell is in operation**) until the June 12, 2008 move to Outfall A01 Phase II; **or** the

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startup of Outfall B01 for the Mercury Cell Closure Transition; **or** the startup of the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

Outfall A01 Phase II - This schedule will be used in the **current outfall location**. It covers the period upon startup of Outfall A01 Phase II beginning on June 13, 2008 (while the **mercury cell is in operation**) until the move to Outfall A01 Phase III, three years after the effective date of the permit; **or** the startup of Outfall B01 for the Mercury Cell Closure Transition; **or** the startup of Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

Outfall A01 Phase III - This schedule will be used in the **current outfall location**. It covers the period upon startup of Outfall A01 Phase III, three years from the effective date of the permit (while the **mercury cell is in operation**) until the startup of Outfall B01 for the Mercury Cell Closure Transition; **or** the startup of Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River; **or** permit expiration.

Outfall B01 Phase I - This schedule will be used in the **current outfall location**. It covers the period upon startup of Outfall B01 for the Mercury Cell Closure Transition prior to June 12, 2008 (during the **mercury cell closure transition**) until the June 12, 2008 move into Outfall B01 Phase II; **or** the startup of the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

Outfall B01 Phase II - This schedule will be used in the **current outfall location**. It covers the period upon startup of Outfall B01 Phase II beginning on June 13, 2008 (during the **mercury cell closure transition**) until the move into Outfall B01 Phase III, three years after the effective date of the permit; **or** the startup Outfall 001 for the relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

Outfall B01 Phase III - This schedule will be used in the **current outfall location**. It covers the period upon startup of Outfall B01 Phase III, three years from the effective date of the permit (during the **mercury cell closure transition**) until the startup of the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River; **or** permit expiration.

Outfall 001 Phase I - This schedule will be used in the **proposed new outfall location**. It covers the period upon the startup of the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River prior to June 12, 2008 (during the **mercury cell closure transition**) until the June 12, 2008 move into Outfall 001 Phase II.

Outfall 001 Phase II - This schedule will be used in the **proposed new outfall location**. It covers the period upon startup of Outfall 001 Phase II, after the relocation from Bayou D'Inde to the Main Stem of the Calcasieu River beginning on June 13, 2008 (during the **mercury cell closure transition**) until the startup of Outfall 001 Phase III, three years from the effective date of the permit.

Outfall 001 Phase III - This schedule will be used in the **proposed new outfall location**. It covers the period after the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River, three years from the effective date of the permit (during the **mercury cell closure transition**) until permit expiration.

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Please Note: Only **ONE** of these outfalls/phases will be discharging at any given time. PPG Industries will be required to submit proper notification to this Office and the Office of Environmental Compliance prior to changing the operational phase/outfall designation. Also, any of the schedules above may be skipped depending on the situation. There are a number of combinations that could occur.

For instance, if PPG Industries does not relocate Outfall 001 within this permitting cycle and does not proceed with the decommissioning of the mercury cell, they shall use the schedules for Outfall A10, Phase I, II, & III.

If PPG Industries proceeds with the decommissioning of the mercury cell, but does not relocate Outfall 001 within this permitting cycle, they shall use a combination of schedules for Outfall A10 (Phase I, II, & III) and/or B10 (Phase I, II, & III).

If PPG Industries proceeds with the decommissioning of the mercury cell and the relocation of this outfall, then they shall use a combination of schedules for Outfall A10 (Phase I, II, & III), and/or B10 (Phase I, II, & III), and/or 001 (Phase I, II, & III).

- C. Outfalls A01, B01, and 001 - sample location has been changed from Mobil Bridge No. 2 to Mobil Bridge No. 1 due to damages incurred at the Mobil Bridge No. 2 monitoring station during Hurricane Rita.

Per company request, four alternate sample locations have also been identified for this outfall. The alternate locations are proposed to be used during remediation activities only. PPG shall use the furthest downstream sampling location that is outside the influence of the remediation activity. The alternate locations are as follows:

Alternate Location 1 - at the point of discharge from the sonar platform upstream of the weir on the discharge canal (Latitude 30° 12' 56", Longitude 93° 17' 18"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

Alternate Location 2 - at the point of discharge from the salvage yard wood bridge (Latitude 30° 13' 11", Longitude 93° 17' 05"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

Alternate Location 3 - at the point of discharge from pH probe wood platform near the neutralization tanks at Outfall A01, B01, or 001 (Latitude 30° 13' 20", Longitude 93° 17' 06"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

Alternate Location 4 - at the point of discharge from the riverside canal steel platform (Latitude 30° 13' 16", Longitude 93° 16' 53"), prior to combining with any other wastewaters and/or the waters of Bayou D'Inde.

- D. Outfalls A01, B01, and 001 - PPG Industries has requested that biomonitoring be sampled at once per quarter then after one year of successful results, the frequency be reduced to semi-annually. This request has been denied based upon the requirement for quarterly sampling established in the Upper Calcasieu Estuary TMDL for Bayou D'Inde and the Main Stem of the Calcasieu River, issued in the Federal Register on June 13, 2002.
- E. Outfalls A01, B01, and 001 - PPG Industries has requested to add monitor and report requirements for Risk Evaluation and Corrective Action Program (RECAP) parameters. LAC

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33:I. Chapter 13 defines "surface waters" as excluding certain on-site ditches. The definition in RECAP states; "Ditches that are part of a treatment system shall not be considered surface water provided that the treatment system is monitored downstream of an impacted area for the [constituents of concern] under the terms of an LPDES permit. Under the RECAP Program, the LDEQ Environmental Remediation Group has identified several constituents of concern. Therefore, to ensure that the PPG Canal meets the above exclusion, and to demonstrate that such potential constituents are monitored, this request has been granted.

In accordance with RECAP requirements and a recommendation from LDEQ's Environmental Remediation Group, the following parameters were identified as constituents of concern for monitoring: 1,1,2,2-Tetrachloroethane (TMDL parameter for Bayou D'Inde), 1,1,2-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloroethene, 1,2-Dichloropropane, Benzene, Bis(2-chloroethyl)Ether, Bis(2-ethylhexyl)phthalate, Bromoform (TMDL parameter for Bayou D'Inde), Carbon Tetrachloride, Chlorobenzene, Chloroform, Cis-1,2-Dichloroethene, Dichloromethane, Hexachloroethane, Naphthalene, Pentachlorophenol, Phenol, Tetrachloroethene, Total Thallium, Trichloroethene, and Vinyl Chloride.

- F. Outfalls A01, B01, and 001 - Monthly Average and Daily Maximum limitations for BOD₅ have been established to ensure compliance with the OCPSF Guidelines under 40 CFR Part 414 for Internal Outfall 20A and/or Outfall 201. Limitations were established as part of the final outfall to due to sample interference from inorganic sources at the internal outfall. The monitoring frequency has been established at 3/week based on Best Professional Judgment (BPJ).

In addition to ensuring compliance with the OCPSF Guidelines, BOD₅ limitations were also established consistent with the Calcasieu Estuary Dissolved Oxygen TMDL issued on July 1, 2002. Subsegment 030901, for Bayou D'Inde was included in this TMDL, but the TMDL required no reductions from current non-point or point sources. The typical permitting approach would be to maintain DO at existing levels (discharges from Outfall A01 and B01). However, the current NPDES permit issued to PPG Industries, effective on July 1, 1991, did not establish oxygen-limiting parameters to use as a baseline. Since the preliminary draft permit incorporates new technology-based limitations for BOD₅, since the process flow rates used in the TMDL modeling efforts are greater than existing process flow rates, and since the D.O. TMDL did not require reductions from this point source, the limitations established for BOD₅ are consistent with the applicable D.O. TMDL.

- G. Outfalls A01 and B01 - The parameters Total Copper, Total Mercury, PCB-1254, and 1,1,2,2-Tetrachloroethane have been added as per the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002. Phase I requirements to monitor and report are proposed to commence on the effective date of the permit and expire on June 12, 2008. Phase II becomes effective on June 12, 2008 and incorporates the Daily Maximum loading as established by the TMDL. The Monitoring frequencies have been established at 1/quarter for all Phases.
- H. Outfalls A01 and B01 - Monthly Average and Daily Maximum mass limitations for Hexachlorobenzene, Hexachlorobutadiene, and Bromoform have been retained from the current modified NPDES permit, effective on July 1, 1991. These parameters were also included in the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002. The retained limitations included in Phase I requirements are proposed to commence on the effective date of the permit and expire on June 12, 2008.

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- I. Outfalls A01 and B01 - Based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the measurement frequencies for Hexachlorobenzene, Hexachlorobutadiene, and Bromoform have been changed from 3/week to 1/week for all Phases.
- J. Outfalls A01 and B01 - To protect against the potential for discharges of the Bayou D'Inde TMDL pollutants Total Copper, Total Mercury, Hexachlorobenzene, Hexachlorobutadiene, and Pcb-1254 at levels above that of state water quality standards, and for discharges of Total Copper, Total Mercury, Hexachlorobenzene, Hexachlorobutadiene, and Pcb-1254 at levels exceeding state water quality standards, site specific MQL's were developed for these parameters. See Part II.J of the permit for calculations.
- K. Outfalls A01 and B01 - Non-TMDL Water Quality Based Limitations for Total Nickel and 1,1-Dichloroethylene have been established at these outfalls in order to ensure the discharges from PPG Industries do not violate water quality standards. In accordance with LAC 33:IX.1109.D.1., the Department of Environmental Quality has granted PPG Industries three years from the effective date of the permit to come into compliance with current water quality standards. Therefore, monitor and report only requirements have been established for Phases I and II and Monthly Average and Daily Maximum limitations have been established for Phase III. The frequency has been established at 1/quarter for all Phases.
- L. Outfall 001 - Monthly Average and Daily Maximum limitations for BOD₅ have been established to ensure compliance with the OCPSF Guidelines under 40 CFR Part 414 for Internal Outfall 201. Limitations were established as part of the final outfall to due to sample interference from inorganic sources at the internal outfall.
- M. Outfall 001 - The loadings for Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene have been established based upon an allocation of the available Margin of Safety (MOS) as identified in the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002. Phase I requirements to monitor and report are proposed to commence on the effective date of the permit and expire on June 12, 2008. Phase II becomes effective on June 12, 2008 and incorporates the Daily Maximum loadings as required by the TMDL. Monitoring frequencies have been established at 1/quarter for all Phases. See Part II.O for calculation of loadings.
- N. Outfall 001 - Based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the measurement frequencies for Hexachlorobenzene, and Hexachlorobutadiene have been changed from 3/week to 1/week for all Phases.
- O. Outfall 001 - Bromoform was established in the current modified NPDES permit, effective July 1, 1991, based on a water quality assessment of Bayou D'Inde. The Final Integrated Report for the receiving waterbody (Main Stem of the Calcasieu River) does not include Bromoform as an impairment. A water quality screen was also performed and did not indicate the need for a water quality based limitation at this outfall location. Therefore, Bromoform has been dropped as a parameter from this outfall.
- P. Outfall 001 - Non-TMDL Water Quality Based Limitations for Total Nickel were established at this outfall in order to ensure the discharges from PPG Industries do not violate water quality standards. In accordance with LAC 33:IX.1109.D.1., the Department of

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Environmental Quality has granted PPG Industries three years from the effective date of the permit to come into compliance with current water quality standards. Therefore, monitor and report only requirements have been established for Phases I and II and Monthly Average and Daily Maximum limitations have been established for Phase III. The frequency has been established at 1/quarter for all Phases.

- Q. Outfall 001 - to protect against the potential for discharges of the Upper Calcasieu Estuary for the TMDL pollutants Benzo(a)anthracene and Benzo(a)pyrene at levels above that of state water quality standards, and for discharges of Benzo(a)anthracene and Benzo(a)pyrene at levels exceeding state water quality standards, site specific MQL's were developed for these parameters. See Part II.K of the permit for calculations.
- R. Internal Outfalls 10A, 10B, and 101 - Outfalls 10A and 10B are the same outfall as 101, but are given different outfall designators due to the relocation of the final outfall, multiple operational phases, and the different limitations assigned to each operational phase. Outfall 10A and 10B will represent operating scenarios at the Bayou D'Inde location (current location) and 101 will represent scenarios for the proposed new outfall location on the Main Stem of the Calcasieu River. This will aide LDEQ's Compliance Group and ensure that the correct Discharge Monitoring Reports (DMRs) are submitted to this Office. Currently, this facility has 6 scenarios for discharge limitations under Outfalls 10A, 10B, and 101. These are as follows:

Internal Outfall 10A Phase I - This schedule will be used in the **current outfall location**. It covers the period from the effective date of the permit (while the **mercury cell is in operation**) until the June 12, 2008 move into Outfall 10A Phase II; **or** the startup of Outfall 10B for the Mercury Cell Closure Transition; **or** the startup of Outfall 101 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River.

Internal Outfall 10A Phase II - This schedule will be used in the **current outfall location**. It covers the period upon startup of Outfall 10A Phase II beginning on June 13, 2008 (while the **mercury cell is in operation**) until the startup of Outfall 10B for the Mercury Cell Closure Transition; **or** the startup of Outfall 101 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River; **or** permit expiration.

Internal Outfall 10B Phase I - This schedule will be used in the **current outfall location**. It covers the period upon the startup of Outfall 10B for the Mercury Cell Closure Transition prior to June 12, 2008 (while the **mercury cell is in operation**) until the June 12, 2008 move into Outfall 10B Phase II; **or** the startup of Outfall 101 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River.

Internal Outfall 10B Phase II - This schedule will be used in the **current outfall location**. It covers the period upon startup of Outfall 10B Phase II beginning on June 13, 2008 (while the **mercury cell is in operation**) until the startup of Outfall 101 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River; **or** permit expiration.

Internal Outfall 101 Phase I - This schedule will be used in the **proposed new outfall location**. It covers the period upon the startup of Outfall 101 for the

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Mercury Cell Closure Transition after the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River is complete, prior to June 12, 2008 (during the **mercury cell closure transition**) until the June 12, 2008 move into Outfall 101 Phase II.

Internal Outfall 101 Phase II - This schedule will be used in the **proposed new outfall location**. It covers the period upon the **startup** of Outfall 101 Phase II for the Mercury Cell Closure Transition after the **relocation** of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River, beginning on June 13, 2008 (during the **mercury cell closure transition**) until permit expiration.

Please Note: Only **ONE** of these internal outfalls/phases will be discharging at any given time. PPG Industries will be required to submit proper notification to this Office and the Office of Environmental Compliance prior to changing the operational phase/outfall designation. Also, any of the schedules above may be skipped depending on the situation.

- S. Internal Outfalls 10A, 10B, and 101 - Monthly Average and **Daily** Maximum limitations for Total Lead have been established to ensure compliance with **the** Inorganic Guidelines under 40 CFR Part 415.60. The monitoring frequency has been established at 1/week.
- T. Internal Outfalls 10A and 10B - The parameters Hexachlorobutadiene, Hexachlorobenzene, Bromoform, PCB-1254, and 1,1,2,2-Tetrachloroethane have been added as per the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002. Phase I requirements to monitor and report are proposed to commence on the effective date of the permit and expire on June 12, 2008. Phase II becomes effective on June 12, 2008 and incorporates the Daily Maximum loading as established by the TMDL. The monitoring frequencies for Hexachlorobutadiene, Hexachlorobenzene, and Bromoform have been established at 1/week to mirror the frequencies established at the final outfall. The final outfall uses the sum of internal outfalls 10A and 20A or 10B and 20A as the final loading, therefore, it is appropriate to establish the same frequency. The monitoring frequency for PCB-1254 and 1,1,2,2-Tetrachloroethane has been established at 1/quarter in accordance with the requirements of the TMDL.
- U. Internal Outfalls 10A and 10B - The parameters Total Copper and Total Mercury are also identified as parameters in Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002. Technology based limitations have been established in Phase I and are proposed to commence on the effective date of the permit and expire on June 12, 2008. Phase II becomes effective on June 12, 2008 and incorporates the Daily Maximum loading as established by the TMDL.
- V. Internal Outfalls 10A and 10B - PPG Industries has requested a reduction in the measurement frequency for TSS, Total Residual Chlorine, Total Copper, Total Mercury, and Total Nickel. Therefore, based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the measurement frequencies for Total Residual Chlorine, Total Copper, Total Mercury, and Total Nickel have been changed from 3/week to 1/week and the frequency for TSS has been changed from 3/week to 2/week.
- W. Internal Outfall 101 - The parameters Benzo(a)anthracene and Benzo(a)pyrene have been added as per the Upper Calcasieu Estuary TMDL for Main Stem of the Calcasieu River issued

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in the Federal Register on June 13, 2002. Phase I requirements to monitor and report are proposed to commence on the effective date of the permit and expire on June 12, 2008. Phase II becomes effective on June 12, 2008 and incorporates a Daily Maximum loading as required by the TMDL. See Part II.O for calculation of loadings. The monitoring frequencies for Benzo(a)anthracene and Benzo(a)pyrene have been established at 1/quarter in accordance with the requirements of the TMDL.

- X. Internal Outfall 101 - The parameters Total Copper and Total Mercury are also identified as parameters in the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002. Technology based limitations have been established in Phase I and are proposed to commence on the effective date of the permit and expire on June 12, 2008. Phase II becomes effective on June 12, 2008 and incorporates a Daily Maximum loading as required by the TMDL. See Part II.O for calculation of loadings.
- Y. Internal Outfall 101 - PPG Industries has requested a reduction in the measurement frequency for TSS, Total Residual Chlorine, Total Copper, Total Mercury, and Total Nickel. Therefore, based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the measurement frequencies for Total Residual Chlorine, Total Copper, Total Mercury, and Total Nickel have been changed from 3/week to 1/week and the frequency for TSS has been changed from 3/week to 2/week.
- Z. Internal Outfalls 20A and 201 - Outfall 20A is the same outfall as 201, but has been given a different outfall designator due to the relocation of the final outfall, multiple operational phases, and the different limitations assigned to each operational phase. Outfall 20A will represent operating scenarios at the Bayou D'Inde location (current location) and 201 will represent scenarios for the proposed new outfall location on the Main Stem of the Calcasieu River. This will aide LDEQ's Compliance Group and ensure that the correct Discharge Monitoring Reports (DMRs) are submitted to this Office. Currently, this facility has 4 scenarios for discharge limitations under Outfalls 20A and 201. These are as follows:

Internal Outfall 20A Phase I - This schedule will be used in the **current outfall location**. It covers the period until the June 12, 2008 move into Outfall 20A Phase II (**Pre-TMDL Parameters**); or the startup of the Outfall 201 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River.

Internal Outfall 20A Phase II - This schedule will be used in the **current outfall location**. It covers the period upon startup of Outfall 20A Phase II beginning on June 13, 2008 (**Post-TMDL Parameters**) until startup of Outfall 201 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River; or permit expiration.

Internal Outfall 201 Phase I - This schedule will be used in the **proposed new outfall location**. It covers the period upon the startup of the Outfall 201 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River, prior to June 12, 2008 (**Pre-TMDL Parameters**) until the June 12, 2008 move into Outfall 201 Phase II.

Internal Outfall 201 Phase II - This schedule will be used in the **proposed new outfall location**. It covers the period upon the startup of Outfall 201 Phase II,

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after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River, beginning on June 13, 2008 (**Post-TMDL Parameters**) until permit expiration.

Please Note: Only **ONE** of these internal outfalls/phases will be discharging at any given time. PPG Industries will be required to submit proper notification to this Office and the Office of Environmental Compliance prior to changing the operational phase/outfall designation. Also, any of the schedules above may be skipped depending on the situation.

- AA. Internal Outfall 20A - OCPSP and Inorganic Guidelines under 40 CFR Part 414 and 40 CFR Part 415.60 were applied to the discharges from this outfall. As a result of guideline application, Monthly Average and Daily Maximum limitations have been established for the following **new** parameters: Total Lead, Total Zinc, Phenol, Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)-phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, and 1,2,4-Trichlorobenzene. These pollutants are not expected to be present at this facility, therefore, monitoring frequencies have been established at 1/year for all phases.
- BB. Internal Outfall 20A - OCPSP and Inorganic Guidelines under 40 CFR Part 414 and 40 CFR Part 415.60 were applied to the discharges from this outfall. As a result of guideline application, Monthly Average and Daily Maximum limitations have been established for the following **existing** parameters: Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene.
- CC. Internal Outfall 20A - The parameters Total Mercury, Bromoform, PCB-1254, and 1,1,2,2-Tetrachloroethane have been added as per the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002. Phase I requirements to monitor and report are proposed to commence on the effective date of the permit and expire on June 12, 2008. Phase II becomes effective on June 12, 2008 and incorporates the Daily Maximum loading as established by the TMDL. The monitoring frequencies for Total Mercury and Bromoform have been established at 1/week to mirror the frequencies established at the final outfall. The final outfall uses the sum of internal outfalls 10A and 20A or 10B and 20A as the final loading, therefore, it is appropriate to establish the same frequency. The monitoring frequency for PCB-1254 and 1,1,2,2-Tetrachloroethane has been established at 1/quarter in accordance with the requirements of the TMDL.
- DD. Internal Outfall 20A - The parameters Total Copper, Hexachlorobenzene, and Hexachlorobutadiene are also identified as parameters in Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002. Technology based limitations have been established in Phase I and are proposed to commence on the effective date of the permit and expire on June 12, 2008. Phase II becomes effective on June 12, 2008 and incorporates the Daily Maximum loading as established by the TMDL.

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- EE. Internal Outfall 20A and 201 - PPG Industries has requested a reduction in the measurement frequency for TSS, Total Residual Chlorine, Total Copper, Total Nickel, Carbon Tetrachloride, chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene. Therefore, based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the measurement frequencies for Total Residual Chlorine, Total Copper, Total Nickel, Carbon Tetrachloride, chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene have been changed from 3/week to 1/week and the frequency for TSS has been changed from 3/week to 2/week.
- FF. Internal Outfall 201 - OCPSF and Inorganic Guidelines under 40 CFR Part 414 and 40 CFR Part 415.60 were applied to the discharges from this outfall. As a result of guideline application, Monthly Average and Daily Maximum limitations have been established for the following **new** parameters: Total Lead, Total Zinc, Phenol, Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)-phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, and 1,2,4-Trichlorobenzene. These pollutants are not expected to be present at this facility, therefore, monitoring frequencies have been established at 1/year for all parameters except Benzo(a)anthracene, Benzo(a)pyrene which has been established at 1/quarter based on the requirements of the TMDL.
- GG. Internal Outfall 201 - OCPSF and Inorganic Guidelines under 40 CFR Part 414 and 40 CFR Part 415.60 were applied to the discharges from this outfall. As a result of guideline application, Monthly Average and Daily Maximum limitations have been established for the following **existing** parameters: Carbon Tetrachloride, chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene.
- HH. Internal Outfall 201 - Total Mercury have been added as per the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002. Phase I requirements to monitor and report are proposed to commence on the effective date of the permit and expire on June 12, 2008. Phase II becomes effective on June 12, 2008 and incorporates the Daily Maximum loading as established by the TMDL. The monitoring frequency for Total Mercury has been established at 1/week to mirror the frequencies established at the final outfall. The final outfall uses the sum of internal outfalls 101 and 201 as the final loading, therefore, it is appropriate to establish the same frequency.
- II. Internal Outfall 201 - The parameters Total Copper, Benzo(a)anthracene, and Benzo(a)pyrene were also identified as parameters in Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002.

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Technology based limitations have been established in Phase I and are proposed to commence on the effective date of the permit and expire on June 12, 2008. Phase II becomes effective on June 12, 2008 and incorporates the Daily Maximum loading as established by the TMDL. The monitoring frequency for Total Copper has been established at 1/week to mirror the frequencies established at the final outfall. The final outfall uses the sum of internal outfalls 101 and 201 as the final loading, therefore, it is appropriate to establish the same frequency. The monitoring frequency for Benzo(a)anthracene and Benzo(a)pyrene has been established at 1/quarter in accordance with the requirements of the TMDL.

- JJ. Internal Outfalls 30A and 301 - In the current modified NPDES permit, effective on July 1, 1991, PPG Industries is authorized to discharge stormwater, once-through non-contact wastewater, furnace decoking water, sludge incinerator surface runoff, and tank dike drainage water. The permittee has requested authorization to discharge post first flush stormwater only. It is believed that this discharge will be very infrequent (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment).
- KK. Internal Outfalls 30A and 301 - Outfall 30A is the same outfall as 301, but has been given a different outfall designator due to the relocation of the final outfall. Outfall 30A will represent an operating scenario at the Bayou D'Inde location (current location) and 301 will represent the scenario for the proposed new outfall location on the Main Stem of the Calcasieu River. This will aide LDEQ's Compliance Group and ensure that the correct Discharge Monitoring Reports (DMRs) are submitted to this Office. Currently, this facility has 2 scenarios for discharge limitations under Outfalls 30A and 301. These are as follows:

Internal Outfall 30A - This schedule will be used in the **current outfall location**. It covers the period starting on the effective date of the permit until the startup of Outfall 301 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River.

Internal Outfall 301 - This schedule will be used in the **proposed new outfall location**. It covers the period upon the startup of Outfall 301 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River until permit expiration.

Please Note: Only **ONE** of these outfalls will be discharging at any given time. PPG Industries will be required to submit proper notification to this Office and the Office of Environmental Compliance prior to changing the operational phase/outfall designation. Also, any of the schedules above may be skipped depending on the situation.

- LL. Internal Outfalls 30A and 301 - PPG Industries has requested a reduction in the measurement frequency for Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene. Since this outfall no longer has the same wastewaters as the current modified NPDES permit and is expected to discharge infrequently (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment), monitoring frequencies at 3/week are no longer appropriate. Therefore, based on revised outfall waste streams and good compliance history, the measurement frequencies

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for Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene have been changed from 3/week to 1/month.

- MM. Internal Outfalls 30A and 301 - Limitations of 50 mg/L Daily Maximum for TOC and 15 mg/L Daily Maximum for Oil and Grease have been established. These limitations are based on current guidance for stormwater discharges, The Multi-Sector General Permit for Industrial Stormwater Discharges, and Best Professional Judgment (BPJ).
- NN. Internal Outfall 30A - In the current modified NPDES permit, PPG Industries has been sampling for a number of organic parameters as the correspond to those sampled at Internal Outfall 20A. In this proposed permit, OCPSF and Inorganic Guideline parameters were applied to the discharges of Internal Outfall 20A, therefore, LDEQ will require corresponding sampling (monitor and reporting requirements only) at this Outfall for the new guideline parameters: Phenol, Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)-phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, and 1,2,4-Trichlorobenzene. These pollutants are not expected to be present at this facility, therefore, monitoring frequencies have been established at 1/year.
- OO. Internal Outfall 30A - In the current modified NPDES permit, PPG Industries has been sampling for a number of organic parameters as the correspond to those sampled at Internal Outfall 20A. In this proposed permit, OCPSF and Inorganic Guideline parameters were applied to the discharges of Internal Outfall 20A, therefore, LDEQ will require corresponding sampling (monitor and reporting requirements only) at this Outfall for the **existing** parameters: Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene. These pollutants shall be monitored 1/month.
- PP. Internal Outfall 30A - Monitor and report only requirements have been established for Total Copper, Total Mercury, PCB-1254, Bromoform, and 1,1,2,2-Tetrachloroethane in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.
- QQ. Internal Outfall 301 - In the current modified NPDES permit, PPG Industries has been sampling for a number of organic parameters as the correspond to those sampled at Internal Outfall 201. In this proposed permit, OCPSF and Inorganic Guideline parameters were applied to the discharges of Internal Outfall 201, therefore, LDEQ will require corresponding sampling (monitor and reporting requirements only) at this Outfall for the new guideline parameters: Phenol, Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene,

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Benzo(k)fluoranthene, Bis(2-ethylhexyl)-phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, and 1,2,4-Trichlorobenzene. These pollutants are not expected to be present at this facility, therefore, monitoring frequencies have been established at 1/year for all parameters except Benzo(a)anthracene, Benzo(a)pyrene. These parameters will be monitored 1/quarter since they are TMDL parameters in the Main Stem of the Calcasieu River.

- RR. Internal Outfall 301 - In the current modified NPDES permit, PPG Industries has been sampling for a number of organic parameters as the correspond to those sampled at Internal Outfall 201. In this proposed permit, OCPSF and Inorganic Guideline parameters were applied to the discharges of Internal Outfall 201, therefore, LDEQ will require corresponding sampling (monitor and reporting requirements only) at this Outfall for the **existing** parameters: Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene. These pollutants shall be monitored 1/month.
- SS. Internal Outfall 301 - Monitor and report only requirements have been established for Total Copper, Total Mercury in accordance with the Upper Calcasieu Estuary TMDL for the Upper Calcasieu Estuary issued in the Federal Register on June 13, 2002.

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TT. **Operating Scenario Quick Reference Chart**

While The Mercury Cell Is In Operation			Mercury Cell Closure In Transition			Mercury Cell Closure In Transition		
Bayou D'Inde			Bayou D'Inde			Calcasieu River Main Stem		
Outfall	Phase	Phase Scenario	Outfall	Phase	Phase Scenario	Outfall	Phase	Phase Scenario
A01	I	Pre TMDL Parameters & Pre Water Quality Parameters (Non-TMDL)	B01	I	Pre TMDL Parameters & Pre Water Quality Parameters (Non-TMDL)	001	I	Pre TMDL Parameters & Pre Water Quality Parameters (Non-TMDL)
	II	Post TMDL Parameters & Pre Water Quality parameters (Non-TMDL)		II	Post TMDL Parameters & Pre Water Quality parameters (Non-TMDL)		II	Post TMDL Parameters & Pre Water Quality parameters (Non-TMDL)
	III	Post TMDL & Post Water Quality Parameters (Non TMDL)		III	Post TMDL & Post Water Quality Parameters (Non TMDL)		III	Post TMDL & Post Water Quality Parameters (Non TMDL)
10A	I	Pre TMDL Parameters	10B	I	Pre TMDL Parameters	101	I	Pre TMDL Parameters
	II	Post TMDL Parameters		II	Post TMDL Parameters		II	Post TMDL Parameters
20A	I	Pre TMDL Parameters	20A	I	Pre TMDL Parameters	201	I	Pre TMDL Parameters
	II	Post TMDL Parameters		II	Post TMDL Parameters		II	Post TMDL Parameters
30A	No Phases		30A	No Phases		301	No Phases	

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- UU. Internal Outfall 401 - Per company request, this outfall has been deleted. PPG Industries proposes to implement first flush procedures at Outfall 401. First flush (five year rainfall event) will be pumped to the WTU for treatment and discharge through Internal Outfall 20A or 201. Post first flush stormwater will consist of overflow which will drain through Silica's pigment ditch and eventually discharge through Outfall 001. PPG proposes to install concrete to facilitate Best Management Practices (BMP). Therefore, the request to remove this outfall from the proposed permit has been granted.
- VV. Internal Outfall 501 - Per company request, this outfall has been deleted. Outfall 501 was a virtual outfall consisting of the sums of Outfalls 201, 301, and 401. Since Outfall 301 is now post first flush stormwater only, with discharges expected to be infrequent (occurring only under extreme storm events or pump failure) and Internal Outfall 401 no longer exists, the need for Internal Outfall 501 is negated. Therefore, the request to remove this outfall from the proposed permit has been granted.
- WW. Outfall 002 - In the current modified NPDES permit, PPG Industries was authorized to discharge low contamination potential stormwater from various locations. The permittee has requested authorization to discharge the following waste streams in this proposed permit: stormwater runoff from Plant A, steam condensate from Diaphragm Cell Chlor/Alkali production (Plant A), once through non-contact cooling water from Plant A, treated bilge water from barge transport vehicle, potential groundwater intrusion, and intermittent discharges of firewater and from condensate piping. This request has been granted.
- XX. Outfall 002 - Limitations of 50 mg/L Daily Maximum for TOC and 15 mg/L Daily Maximum for Oil and Grease have been incorporated into this permit. These limitations were established based on similarly permitted utility discharges at other facilities and Best Professional Judgment (BPJ).
- YY. Outfall 002 - PPG Industries has requested a reduction in the measurement frequency for Flow and pH from 1/day to 3/week. This request has been granted based on compliance history and Best Professional Judgment (BPJ).
- ZZ. Outfall 002 - Monitor and report only requirements have been established for Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene based on the requirements of the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002. Monitoring Frequencies have been established at 1/quarter in accordance with the TMDL.
- AAA. Outfall 004 - In the current modified NPDES permit, PPG Industries was authorized to discharge low once-through non-contact river cooling water, cooling tower blowdown, and low contamination potential stormwater runoff from various areas. The permittee has requested authorization to discharge the following waste streams in this proposed permit: once through non-contact cooling water from Plant A chlorine/caustic facility, wash down from car including car wash, cooling tower blowdown, intermittent discharges from condensate piping and acid tank scrubber discharge, and storm water runoff from caustic storage, chlorine liquefaction, and brine treatment areas. This request has been granted.

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- BBB. Outfall 004 - Limitations of 50 mg/L Daily Maximum for TOC, 15 mg/L Daily Maximum for Oil and Grease, and 45 mg/L Daily Maximum for TSS have been incorporated into this permit. These limitations were established based on similarly permitted utility discharges at other facilities, the Light Commercial General Permit (LAG480000), and Best Professional Judgment (BPJ).
- CCC. Outfall 004 - Chronic Whole Effluent Toxicity Testing has been established at this outfall based on the types of discharges and the use of additives and chlorine for treatment. This can not be composited with Outfall A01, B01, or 001 because the discharges go to two different waterbodies. Biomonitoring requirements are assigned in accordance with the LDEQ/OES Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies (Revised June 30, 2000) (Rationale, Exception 1), and the Best Professional Judgement (BPJ) of the reviewer.
- DDD. Outfall 004 - Monitor and report only requirements have been established for Total Copper, Total Mercury, Total Nickel, Total Zinc, Total Calcium, 1,2-Dichloroethane, Phenol, 2-Methylnaphthalene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Pyrene, and Phenanthrene based on the requirements of the Upper Calcasieu Estuary TMDL for Bayou Verdine issued in the Federal Register on June 13, 2002. Monitoring Frequencies have been established at 1/quarter in accordance with the TMDL.
- EEE. PPG Industries requested language be incorporated into this permit to allow for flow estimation in the event of a disruption in flow due to debris on strain gauges, orifice plugging, or transmission failures caused by lightning strikes or other equipment failures. The Agency is looking into this request, however, the requested language has not been incorporated at this time.

IX Permit Limit Rationale:

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

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B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgement) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII.

1. Outfalls A01, B01, 001, 10A, 10B, 101, 20A, 201, 30A, and 301 - Process Wastewaters

***Outfall A01, while the Mercury Cell is in Operation, Bayou D'Inde Location (Phases I-III)** - the discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; and discharges from Internal Outfalls 10A, 20A, and 30A.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Flow	Report	Report (continuous recording)
pH, Std. Units	Report	Report (continuous recording)
BOD ₅	8663	18510
Temperature (°F)	---	Report
1,1,1,2-Tetrachloroethane	---	Report
1,1,2-Trichloroethane	---	Report
1,1-Dichloroethene	---	Report
1,2-Dichloroethane	---	Report
1,2-Dichloroethene	---	Report
1,2-Dichloropropane	---	Report
Benzene	---	Report
Bis(2-chloroethyl)Ether	---	Report
Bis(2-ethylhexyl)phthalate	---	Report

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Carbon Tetrachloride	---	Report
Chlorobenzene	---	Report
Chloroform	---	Report
Cis-1,2- Dichloroethene	---	Report
Dichloromethane	---	Report
Hexachloroethane	---	Report
Naphthalene	---	Report
Pentachlorophenol	---	Report
Phenol	---	Report
Tetrachloroethene	---	Report
Total Thallium	---	Report
Trichloroethene	---	Report
Vinyl Chloride	---	Report

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.1.1.b. There are two sampling locations for flow. The continuous requirement applies to both locations and will be reported as the arithmetic sum of Flow Locations No. 1 and No. 2.

PH - established in accordance with LAC 33:IX.1113.C.1.

BOD₅ - Monthly Average and Daily Maximum limitations for BOD₅ have been established to ensure compliance with the OCPSF Guidelines under 40 CFR Part 414 for Internal Outfall 20A. Limitations were established as part of the final outfall due to sample interference from inorganic sources at the internal outfall. Allocations were also assigned to account for contributions from Internal Outfall 10A.

Temperature - Daily Maximum Reporting requirements established in the current modified permit, effective on July 1, 1991, have been retained.

PPG Industries requested to add monitor and report requirements for Risk Evaluation and Corrective Action Program (RECAP) parameters. LAC 33:I. Chapter 13 defines "surface waters" as excluding certain on-site ditches. The definition in RECAP states; "Ditches that are part of a treatment system shall not be considered surface water provided that the treatment system is monitored downstream of an impacted area for the [constituents of concern] under the terms of an LPDES permit. Under the RECAP Program, the LDEQ Environmental Remediation Group has identified several constituents of concern. Therefore, to ensure that the PPG Canal meets the above exclusion, and to demonstrate

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that such potential constituents are monitored, this request has been granted. Therefore, monitoring requirements have been established for the following pollutants 1,1,1,2-Tetrachloroethane, 1,1,2-Trichloroethane (TMDL parameter for Bayou D'Inde), 1,1,2-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloroethene, 1,2-Dichloropropane, Benzene, Bis(2-chloroethyl)Ether, Bis(2-ethylhexyl)phthalate, Bromoform (TMDL parameter for Bayou D'Inde), Carbon Tetrachloride, Chlorobenzene, Chloroform, Cis-1,2- Dichloroethene, Dichloromethane, Hexachloroethane, Naphthalene, Pentachlorophenol, Phenol, Tetrachloroethene, Total Thallium, Trichloroethene, and Vinyl Chloride.

INTERNAL OUTFALLS TO OUTFALL A01 INCLUDE 10A, 20A, AND 30A

***Internal Outfall 10A (Phases I-II)** - the discharge of trace contamination process wastewater, treated process wastewater and stormwater from Mercury Cell Chlor/Alkali production facilities including cell room water, seal water, brine treatment solids, and brine purges; process wastewater from the mercury cell process trace including chlorinated condensate, spent sulfuric acid, chlorine seal water, and spent neutralizer caustic and hypochlorite; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; brine solid treatment portion of Plant A; once through non-contact cooling water; and low contamination potential stormwater runoff.

PPG Industries, Inc. Industrial Chemicals, Lake Charles Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

Guideline

Inorganic Chemicals-
Chlor Alkali

Reference

40 CFR 415.60
Subpart F

Calculations and basis of permit limitations are found at Appendix A-3 and associated appendices. See below for site-specific considerations.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Flow	Report	Report (continuous recording)
TSS	1598	3376
Total Residual Chlorine	20.4	33.7

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Lead	5.39	13.25
Total Nickel	8.31	21.79
Total Copper(*)	11.01	26.95
Total Mercury(*)	0.14	0.33

(*) The listed values are technology based limitations. However, these are also TMDL Parameters, with water quality based limitations that become effective on June 13, 2008 (to be addressed in Section IX.C).

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.1.1.b. There are four sampling locations for flow. The continuous requirement applies to all locations and will be reported as the sum of Flow Locations No. 1, No. 2, No. 3 and No. 4.

BOD₅ - Limitations established in accordance with the Inorganic Guidelines at 40 CFR Part 415. Calculated limitations will be established at Final Outfall A01.

Total Copper, Total Lead, Total Nickel, Total Mercury, Total Residual Chlorine - Limitations established in accordance with the Inorganic Guidelines at 40 CFR Part 415.

***Internal Outfall 20A (Phases I-II)** - the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.

PPG Industries, Inc. Industrial Chemicals, Lake Charles Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

Guideline
Organic Chemicals, Plastics,
and Synthetic Fibers

Reference
40 CFR 414
Subparts (F, G, and I)

Inorganic Chemicals-
Chlor Alkali

40 CFR 415.60
Subpart F

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Calculations and basis of permit limitations are found at Appendix A-5 and associated appendices. See below for site-specific considerations.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (lbs/day)</u>	<u>DAILY MAXIMUM (lbs/day)</u>
Flow (MGD)	Report	Report (continuous recording)
TSS	4678	13821
Total Residual Chlorine	28.8	47.3
Total Lead	12.35	29.28
Total Nickel	32.55	80.26
Total Zinc	27.37	36.53
Total Copper	34.21(*)	81.86(*)
Acrylonitrile	1.46	3.59
Benzene	0.88	2.08
Carbon Tetrachloride	2.20	5.89
Chlorobenzene	2.20	5.89
Chloroethane	1.70	4.57
Chloroform	1.72	5.04
1,1-Dichloroethane	0.34	0.91
1,2-Dichloroethane	2.79	8.89
1,1-Dichloroethylene	0.34	0.93
1,2-trans-Dichloroethylene	0.39	1.02
1,2-Dichloropropane	3.04	12.30
1,3-Dichloropropylene	3.04	12.30
Ethylbenzene	2.20	5.89
Methyl Chloride	1.70	4.57
Methylene Chloride	0.56	2.63
Tetrachloroethylene	0.81	2.54
Toluene	0.43	1.15
1,1,1-Trichloroethane	0.34	0.91
1,1,2-Trichloroethane	0.50	1.97

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(lbs/day)</u>	<u>DAILY MAXIMUM</u> <u>(lbs/day)</u>
Trichloroethylene	0.40	1.07
Vinyl Chloride	1.50	2.66
2,4-Dimethylphenol	0.29	0.73
4,6-Dinitro-o-Cresol	1.21	4.29
2,4-Dinitrophenol	18.70	66.48
2-Nitrophenol	1.01	3.58
4-Nitrophenol	2.51	8.92
Phenol	0.80	1.22
Acenaphthene	0.29	0.73
Acenaphthylene	0.29	0.73
Anthracene	0.29	0.73
Benzo (a) anthracene	0.29	0.73
Benzo (a) pyrene	0.31	0.74
3,4-Benzofluoranthene	0.31	0.74
Benzo(k)fluoranthene	0.29	0.73
Bis(2-ethylhexyl)phthalate	1.47	4.00
Chrysene	0.29	0.73
1,2-Dichlorobenzene	3.04	12.30
1,3-Dichlorobenzene	2.20	5.89
1,4-Dichlorobenzene	2.20	5.89
Diethyl phthalate	0.71	1.75
Dimethyl phthalate	0.29	0.73
Di-n-butyl phthalate	0.31	0.67
Fluoranthene	0.34	0.84
Fluorene	0.29	0.73
Hexachloroethane	3.04	12.30
Hexachlorobenzene	3.04(*)	12.30(*)
Hexachlorbutadiene	2.20(*)	5.89(*)

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(lbs/day)</u>	<u>DAILY MAXIMUM</u> <u>(lbs/day)</u>
Naphthalene	0.29	0.73
Nitrobenzene	34.66	99.18
Phenanthrene	0.29	0.73
Pyrene	0.31	0.74
1,2,4-Trichlorobenzene	3.04	12.30

(*) The listed values are technology based limitations. However, these are also TMDL Parameters, with water quality based limitations that become effective on June 13, 2008 (to be addressed in Section IX.C).

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b. There are two sampling locations for flow. The continuous requirement applies to both locations and will be reported as the arithmetic sum of Flow Locations No. 1 and No. 2.

BOD₅ - Limitations established in accordance with the OCPSF and Inorganic Guidelines at 40 CFR Part 414 and 415, respectively. Calculated limitations will be established at Final Outfall A01.

Total Lead, Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 4,6-Dinitro-*o*-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)-phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene, Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene - OCPSF and Inorganic Guidelines under 40 CFR Part 414 and 40 CFR Part 415.60 were applied to the discharges from this outfall.

Zinc - Zinc is an OCPSF parameter with BAT treatment concentrations of 1.05 mg/L, Monthly Average and 2.61 mg/L, Daily Maximum. These BAT treatment concentrations combined with PPG's metal bearing OCPSF discharge flow result in a discharge allocation of 3.191 lbs/day, Monthly Average and 7.933 lbs/day, Daily Maximum. PPG does not have a suitable sample location for the OCPSF metals bearing stream; however a composite sampler is currently in use on the combined metals and non-metals discharge (Outfall 20A, Sample Location No. 2). Samples collected at Outfall 20A, Locations No. 1 and No. 2 indicated

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additional sources of Zinc not related to OCPSF activity are present. Therefore, Zinc limitations were established in accordance with the OCPSF Guidelines at 40 CFR Part 414 with additional allocation for the Non-OCPSF non-metals bearing wastewater. The same BAT treatment loadings of 3.191 lbs/day, Monthly Average and 7.933 lbs/day, Daily Maximum are proposed to be used for the additional allocation and are applied based on Best Professional Judgment.

Phenol - During discussions between LDEQ and PPG Industries held on May 23, 2006, and June 7, 2006, PPG Industries indicated that OCPSF Guideline limitations would not be achievable due to Non-OCPSF sources (groundwater remediation wastewater originating from the South Terminal) contributing to this outfall. After careful review of 26 concurrent samples taken at the outfall and from a location near the South Terminal, LDEQ concurs that the OCPSF allocation alone is insufficient. Since there is known technology available for phenol treatment, LDEQ and EPA Region VI agreed that a fifty percent (50%) reduction in the phenol loading from the South Terminal is reasonably achievable. Therefore, phenol limitations were established in accordance with the OCPSF Guidelines at 40 CFR Part 414 with additional allocation for the Non-OCPSF groundwater remediation wastewater, based on Best Professional Judgment.

PPG Industries proposed a Monthly Average value of 1.04 lbs/day (95th percentile) and a Daily Maximum value of 1.22 lbs/day (99th percentile) for phenol at this outfall, based on discussions of a 50% reduction at the South Terminal.

CONTRIBUTING SOURCES	FLOW (MGD)	MASS LBS/DAY		CONCENTRATION MG/L	
		Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
OCPSF Guideline 40 CFR Part 414 (See Appendix A for calculation)	1.3536	0.214491	0.530584	0.019	0.047
South Terminal (S.T.) BPJ	0.504	0.587644	0.689351	0.139803	0.164

The following calculations were used to establish limitations:

1.219935 lbs/day - OCPSF Guideline lbs/day, Daily Max=S.T. lbs/day, Daily Max

1.219935 lbs/day - 0.530584 lbs/day, Daily Max=0.689351 lbs/day, Daily Max

Generic Equations:

$$\text{mg/L} = \frac{\text{lbs/day}}{\text{Flow, MGD} \times 8.34 \text{ lbs/gal}}$$

$$\text{lbs/day} = \text{mg/L} \times \text{Flow, MGD} \times 8.34 \text{ lbs/gal}$$

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$$\text{Monthly Average, mg/L} = \frac{\text{Proposed Average, lbs/day} \times \text{Daily Maximum, mg/L}}{\text{Proposed Maximum, lbs/day}}$$

South Terminal Daily Maximum []:

$$\text{mg/L} = \frac{0.689351 \text{ lbs/day}}{0.504 \text{ MGD} \times 8.34 \text{ lbs/gal}}$$

$$\text{mg/L} = 0.164$$

South Terminal Daily Maximum Mass:

$$\text{lbs/day} = 0.164 \text{ mg/L} \times 0.504 \text{ MGD} \times 8.34 \text{ lbs/gal}$$

$$\text{lbs/day} = 0.689351$$

The value for the Monthly Average [] was derived using the ratio of the Monthly Average and Daily Maximum Values as proposed by PPG Industries.

South Terminal Monthly Average []:

$$\text{mg/L} = \frac{1.04 \text{ lbs/day} \times 0.164 \text{ mg/L}}{1.22 \text{ lbs/day}}$$

$$\text{mg/L} = 0.139803$$

South Terminal Monthly Average Mass:

$$\text{lbs/day} = 0.1398 \text{ mg/L} \times 0.504 \text{ MGD} \times 8.34 \text{ lbs/gal}$$

$$\text{lbs/day} = 0.587644$$

Outfall 20A Phenol Limitations:

Monthly Avg = OCPSF lbs/day, Monthly Avg + S.T. lbs/day, Monthly Avg

Monthly Avg = 0.214491 lbs/day, Monthly Avg + 0.587644 lbs/day, Monthly Avg

Monthly Avg = 0.80 lbs/day

Daily Max = OCPSF lbs/day, Daily Max + S.T. lbs/day, Daily Max

Daily Max = 0.530584 lbs/day, Daily Max + 0.689351 lbs/day, Daily Max

Daily Max = 1.22 lbs/day

***Internal Outfall 30A** - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment).

PPG Industries, Inc. Industrial Chemicals, Lake Charles Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

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Guideline
 Organic Chemicals, Plastics,
 and Synthetic Fibers

Reference
 40 CFR 414
 Subparts (F ,G, and I)

Inorganic Chemicals-
 Chlor Alkali

40 CFR 415.60
 Subpart F

<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(ug/L)</u>	<u>DAILY MAXIMUM</u> <u>(ug/L)</u>
Flow (MGD)	Report	Report
TOC	Report	50 mg/L
Oil & Grease	Report	15 mg/L
Acrylonitrile	Report	Report
Benzene	Report	Report
Carbon Tetrachloride	Report	Report
Chlorobenzene	Report	Report
Chloroethane	Report	Report
Chloroform	Report	Report
1,1-Dichloroethane	Report	Report
1,2-Dichloroethane	Report	Report
1,1-Dichloroethylene	Report	Report
1,2-trans-Dichloroethylene	Report	Report
1,2-Dichloropropane	Report	Report
1,3-Dichloropropylyene	Report	Report
Ethylbenzene	Report	Report
Methyl Chloride	Report	Report
Methylene Chloride	Report	Report
Tetrachloroethylene	Report	Report
Toluene	Report	Report
1,1,1-Trichloroethane	Report	Report
1,1,2-Trichloroethane	Report	Report
Trichloroethylene	Report	Report

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(ug/L)</u>	<u>DAILY MAXIMUM</u> <u>(ug/L)</u>
Vinyl Chloride	Report	Report
2,4-Dimethylphenol	Report	Report
4,6-Dinitro-o-Cresol	Report	Report
2,4-Dinitrophenol	Report	Report
2-Nitrophenol	Report	Report
4-Nitrophenol	Report	Report
Phenol	Report	Report
Acenaphthene	Report	Report
Acenaphthylene	Report	Report
Anthracene	Report	Report
Benzo (a) anthracene	Report	Report
Benzo (a) pyrene	Report	Report
3,4-Benzofluoranthene	Report	Report
Benzo(k)fluoranthene	Report	Report
Bis(2-ethylhexyl)phthalate	Report	Report
Chrysene	Report	Report
1,2-Dichlorobenzene	Report	Report
1,3-Dichlorobenzene	Report	Report
1,4-Dichlorobenzene	Report	Report
Diethyl phthalate	Report	Report
Dimethyl phthalate	Report	Report
Di-n-butyl phthalate	Report	Report
Fluoranthene	Report	Report
Fluorene	Report	Report
Hexachloroethane	Report	Report
Hexachlorobenzene	Report	Report
Hexachlorbutadiene	Report	Report
Naphthalene	Report	Report

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(ug/L)</u>	<u>DAILY MAXIMUM</u> <u>(ug/L)</u>
Nitrobenzene	Report	Report
Phenanthrene	Report	Report
Pyrene	Report	Report
1,2,4-Trichlorobenzene	Report	Report

Site-Specific Consideration(s)

This outfall is intermittent in nature and will only receive post first flush stormwater discharges occurring after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment. The OCPSF and Inorganic Guideline parameters are not expected to be present at treatable levels in this wastewater. However, since there is no added treatment, report only requirements have been established for the parameters identified at Internal Outfall 20A to determine the pollutant levels from this outfall. This requirement was partially retained from the current modified permit effective on July 1, 1991.

Flow - established in accordance with LAC 33:IX.2707.I.1.b.

TOC and Oil & Grease - limitations established in accordance with general conditions of the Multi-Sector General Permit for Industrial Stormwater Discharges, LAR050000.

Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)-phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene, Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene - OCPSF and Inorganic Guideline Parameters under 40 CFR Part 414 and 40 CFR Part 415.60 were applied to the discharges from this outfall. This outfall contains post first flush stormwater and is expected to discharge infrequently (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment), therefore, monitoring and reporting only has been established at this outfall.

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***Outfall B01, Mercury Cell Closure In Transition, Bayou D'Inde Location (Phases I-III)** - the discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; sulfuric acid stripper water; evaporator area pump seal water; HCL area pump seal water; and discharges from Internal Outfalls 10B, 20A, and 30A.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Flow	Report	Report (continuous recording)
pH, Std. Units	Report	Report (continuous recording)
BOD ₅	8689	18579
Temperature (°F)	---	Report
1,1,1,2-Tetrachloroethane	---	Report
1,1,2-Trichloroethane	---	Report
1,1-Dichloroethene	---	Report
1,2-Dichloroethane	---	Report
1,2-Dichloroethene	---	Report
1,2-Dichloropropane	---	Report
Benzene	---	Report
Bis(2-chloroethyl)Ether	---	Report
Bis(2-ethylhexyl)phthalate	---	Report
Carbon Tetrachloride	---	Report
Chlorobenzene	---	Report
Chloroform	---	Report
Cis-1,2- Dichloroethene	---	Report
Dichloromethane	---	Report
Hexachloroethane	---	Report

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Naphthalene	---	Report
Pentachlorophenol	---	Report
Phenol	---	Report
Tetrachloroethene	---	Report
Thallium	---	Report
Trichloroethene	---	Report
Vinyl Chloride	---	Report

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b. There are two sampling locations for flow. The continuous requirement applies to both locations and will be reported as the arithmetic sum of Flow Locations No. 1 and No. 2.

PH - established in accordance with LAC 33:IX.1113.C.1.

BOD₅ - Monthly Average and Daily Maximum limitations for BOD₅ have been established to ensure compliance with the OCPSF Guidelines under 40 CFR Part 414 for Internal Outfall 20A. Limitations were established as part of the final outfall due to sample interference from inorganic sources at the internal outfall. Allocations were also assigned to account for contributions from Internal Outfall 10B.

Temperature - Daily Maximum Reporting requirements established in the current modified permit, effective on July 1, 1991, have been retained.

PPG Industries requested to add monitor and report requirements for Risk Evaluation and Corrective Action Program (RECAP) parameters. LAC 33:I. Chapter 13 defines "surface waters" as excluding certain on-site ditches. The definition in RECAP states; "Ditches that are part of a treatment system shall not be considered surface water provided that the treatment system is monitored downstream of an impacted area for the [constituents of concern] under the terms of an LPDES permit. Under the RECAP Program, the LDEQ Environmental Remediation Group has identified several constituents of concern. Therefore, to ensure that the PPG Canal meets the above exclusion, and to demonstrate that such potential constituents are monitored, this request was has been granted.

Therefore, monitoring requirements have been established for the following pollutants 1,1,2,2-Tetrachloroethane (TMDL parameter for Bayou D'Inde), 1,1,2-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloroethene, 1,2-Dichloropropane, Benzene, Bis(2-chloroethyl)Ether, Bis(2-ethylhexyl)phthalate, Bromoform (TMDL parameter for Bayou D'Inde), Carbon Tetrachloride, Chlorobenzene, Chloroform, Cis-1,2-Dichloroethene, Dichloromethane, Hexachloroethane, Naphthalene, Pentachlorophenol, Phenol, Tetrachloroethene, Total Thallium, Trichloroethene, and Vinyl Chloride.

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INTERNAL OUTFALLS TO OUTFALL B01 INCLUDE 10B, 20A, AND 30A

***Internal Outfall 10B (Phases I-II)** - the discharge of wastewater from the decommissioning of the Mercury Cell and associated activities; process wastewater from Membrane Cell portion of Plant A including HCL tank vent scrubber effluent, acid and soda ash storage areas process wastewater, and wastewater from the sulfuric acid stripper, membrane cell room floor drains, and pump seal water from evaporator or HCL area; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; process wastewater from brine solid treatment portion of Plant A; once through non-contact cooling water from Diaphragm Cells; and low contamination potential stormwater runoff.

PPG Industries, Inc. Industrial Chemicals, Lake Charles Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

<u>Guideline</u>	<u>Reference</u>
Inorganic Chemicals- Chlor Alkali	40 CFR 415.60 Subpart F

Calculations and basis of permit limitations are found at Appendix A-4 and associated appendices. See below for site-specific considerations.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Flow	Report	Report (continuous recording)
TSS	1983	4277
Total Residual Chlorine	30.7	50.5
Total Lead	9.33	22.94
Total Nickel	14.39	37.71
Total Copper(*)	19.05	46.66
Total Mercury(*)	0.14	0.33

(*) These are technology based limitations. However these are also TMDL Parameters, with water quality based limitations effective on June 13, 2008 (to be addressed in Section IX.C).

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Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b. There are four sampling locations for flow. The continuous requirement applies to all locations and will be reported as the sum of Flow Locations No. 1, No.2, No.3 and No. 4.

BOD₅ - Limitations established in accordance with the Inorganic Guidelines at 40 CFR Part 415. Calculated limitations will be established at Final Outfall B01.

Total Copper, Total Lead, Total Nickel, Total Mercury, Total Residual Chlorine - Limitations established in accordance with the Inorganic Guidelines at 40 CFR Part 415.

***Internal Outfall 20A (Phases I-II)** - the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.

PPG Industries, Inc. Industrial Chemicals, Lake Charles Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

<u>Guideline</u>	<u>Reference</u>
Organic Chemicals, Plastics, and Synthetic Fibers	40 CFR 414 Subparts (F ,G, and I)
Inorganic Chemicals- Chlor Alkali	40 CFR 415.60 Subpart F

Calculations and basis of permit limitations are found at Appendix A-5 and associated appendices. See below for site-specific considerations.

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(lbs/day)</u>	<u>DAILY MAXIMUM</u> <u>(lbs/day)</u>
Flow (MGD)	Report	Report (continuous recording)
TSS	4678	13821
Total Residual Chlorine	28.8	47.3
Total Lead	12.35	29.28
Total Nickel	32.55	80.26
Total Zinc	27.37	36.53
Total Copper	34.21(*)	81.86(*)
Acrylonitrile	1.46	3.59
Benzene	0.88	2.08
Carbon Tetrachloride	2.20	5.89
Chlorobenzene	2.20	5.89
Chloroethane	1.70	4.57
Chloroform	1.72	5.04
1,1-Dichloroethane	0.34	0.91
1,2-Dichloroethane	2.79	8.89
1,1-Dichloroethylene	0.34	0.93
1,2-trans-Dichloroethylene	0.39	1.02
1,2-Dichloropropane	3.04	12.30
1,3-Dichloropropylyene	3.04	12.30
Ethylbenzene	2.20	5.89
Methyl Chloride	1.70	4.57
Methylene Chloride	0.56	2.63
Tetrachloroethylene	0.81	2.54
Toluene	0.43	1.15
1,1,1-Trichloroethane	0.34	0.91
1,1,2-Trichloroethane	0.50	1.97
Trichloroethylene	0.40	1.07

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (lbs/day)</u>	<u>DAILY MAXIMUM (lbs/day)</u>
Vinyl Chloride	1.50	2.66
2,4-Dimethylphenol	0.29	0.73
4,6-Dinitro-o-Cresol	1.21	4.29
2,4-Dinitrophenol	18.70	66.48
2-Nitrophenol	1.01	3.58
4-Nitrophenol	2.51	8.92
Phenol	0.80	1.22
Acenaphthene	0.29	0.73
Acenaphthylene	0.29	0.73
Anthracene	0.29	0.73
Benzo (a) anthracene	0.29	0.73
Benzo (a) pyrene	0.31	0.74
3,4-Benzofluoranthene	0.31	0.74
Benzo(k)fluoranthene	0.29	0.73
Bis(2-ethylhexyl)phthalate	1.47	4.00
Chrysene	0.29	0.73
1,2-Dichlorobenzene	3.04	12.30
1,3-Dichlorobenzene	2.20	5.89
1,4-Dichlorobenzene	2.20	5.89
Diethyl phthalate	0.71	1.75
Dimethyl phthalate	0.29	0.73
Di-n-butyl phthalate	0.31	0.67
Fluoranthene	0.34	0.84
Fluorene	0.29	0.73
Hexachloroethane	3.04	12.30
Hexachlorobenzene	3.04(*)	12.30(*)
Hexachlorbutadiene	2.20(*)	5.89(*)
Naphthalene	0.29	0.73

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> (lbs/day)	<u>DAILY MAXIMUM</u> (lbs/day)
Nitrobenzene	34.66	99.18
Phenanthrene	0.29	0.73
Pyrene	0.31	0.74
1,2,4-Trichlorobenzene	3.04	12.30

(*) The listed values are technology based limitations. However, these are also TMDL Parameters, with water quality based limitations that become effective on June 13, 2008 (to be addressed in Section IX.C).

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b. There are two sampling locations for flow. The continuous requirement applies to both locations and will be reported as the arithmetic sum of Flow Locations No. 1 and No. 2.

BOD₅ - Limitations established in accordance with the OCPSF and Inorganic Guidelines at 40 CFR Part 414 and 415, respectively. Calculated limitations will be established at Final Outfall B01.

Total Lead, Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 4,6-Dinitro-*o*-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)-phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene, Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene - OCPSF and Inorganic Guidelines under 40 CFR Part 414 and 40 CFR Part 415.60 were applied to the discharges from this outfall.

Zinc - Zinc is an OCPSF parameter with BAT treatment concentrations of 1.05 mg/L, Monthly Average and 2.61 mg/L, Daily Maximum. These BAT treatment concentrations combined with PPG's metal bearing OCPSF discharge flow results in a discharge allocation of 3.191 lbs/day, Monthly Average and 7.933 lbs/day, Daily Maximum. PPG does not have a suitable sample location for the OCPSF metals bearing stream; however a composite sampler is currently in use on the combined metals and non-metals discharge (Outfall 20A, Sample Location No. 2). Samples collected at Outfall 20A, Locations No. 1 and No. 2 indicated additional sources of Zinc not related to OCPSF activity are present. Therefore, Zinc limitations were established in accordance with the OCPSF Guidelines at 40

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CFR Part 414 with additional allocation for the Non-OCPSF non-metals bearing wastewater. The same BAT treatment loadings of 3.191 lbs/day, Monthly Average and 7.933 lbs/day, Daily Maximum are proposed to be used for the additional allocation and are applied based on Best Professional Judgment.

Phenol - During discussions between LDEQ and PPG Industries held on May 23, 2006, and June 7, 2006, PPG Industries indicated that OCPSF Guideline limitations would not be achievable due to Non-OCPSF sources (groundwater remediation wastewater originating from the South Terminal) contributing to this outfall. After careful review of 26 concurrent samples taken at the outfall and from a location near the South Terminal, LDEQ concurs that the OCPSF allocation alone is insufficient. Since there is known technology available for phenol treatment, LDEQ and EPA Region VI agreed that a fifty percent (50%) reduction in the phenol loading from the South Terminal is reasonably achievable. Therefore, phenol limitations were established in accordance with the OCPSF Guidelines at 40 CFR Part 414 with additional allocation for the Non-OCPSF groundwater remediation wastewater, based on Best Professional Judgment.

PPG Industries proposed a Monthly Average value of 1.04 lbs/day (95th percentile) and a Daily Maximum value of 1.22 lbs/day (99th percentile) for phenol at this outfall, based on discussions of a 50% reduction at the South Terminal.

CONTRIBUTING SOURCES	FLOW (MGD)	MASS LBS/DAY		CONCENTRATION MG/L	
		Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
OCPSF Guideline 40 CFR Part 414 (See Appendix A for calculation)	1.3536	0.214491	0.530584	0.019	0.047
South Terminal (S.T.) BPJ	0.504	0.587644	0.689351	0.139803	0.164

The following calculations were used to establish limitations:

1.219935 lbs/day - OCPSF Guideline lbs/day, Daily Max=S.T. lbs/day, Daily Max

1.219935 lbs/day - 0.530584 lbs/day, Daily Max=0.689351 lbs/day, Daily Max

Generic Equations:

$$\text{mg/L} = \frac{\text{lbs/day}}{\text{Flow, MGD} \times 8.34 \text{ lbs/gal}}$$

$$\text{lbs/day} = \text{mg/L} \times \text{Flow, MGD} \times 8.34 \text{ lbs/gal}$$

$$\text{Monthly Average, mg/L} = \frac{\text{Proposed Average, lbs/day}}{\text{Proposed Maximum, lbs/day}} \times \text{Daily Maximum, mg/L}$$

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South Terminal Daily Maximum []:

$$\text{mg/L} = \frac{0.689351 \text{ lbs/day}}{0.504 \text{ MGD} \times 8.34 \text{ lbs/gal}}$$

$$\text{mg/L} = 0.164$$

South Terminal Daily Maximum Mass:

$$\text{lbs/day} = 0.164 \text{ mg/L} \times 0.504 \text{ MGD} \times 8.34 \text{ lbs/gal}$$

$$\text{lbs/day} = 0.689351$$

The value for the Monthly Average [] was derived using the ratio of the Monthly Average and Daily Maximum Values as proposed by PPG Industries.

South Terminal Monthly Average []:

$$\text{mg/L} = \frac{1.04 \text{ lbs/day}}{1.22 \text{ lbs/day}} \times 0.164 \text{ mg/L}$$

$$\text{mg/L} = 0.139803$$

South Terminal Monthly Average Mass:

$$\text{lbs/day} = 0.1398 \text{ mg/L} \times 0.504 \text{ MGD} \times 8.34 \text{ lbs/gal}$$

$$\text{lbs/day} = 0.587644$$

Outfall 20A Phenol Limitations:

$$\text{Monthly Avg} = \text{OCPSF lbs/day, Monthly Avg} + \text{S.T. lbs/day, Monthly Avg}$$

$$\text{Monthly Avg} = 0.214491 \text{ lbs/day, Monthly Avg} + 0.587644 \text{ lbs/day, Monthly Avg}$$

$$\text{Monthly Avg} = 0.80 \text{ lbs/day}$$

$$\text{Daily Max} = \text{OCPSF lbs/day, Daily Max} + \text{S.T. lbs/day, Daily Max}$$

$$\text{Daily Max} = 0.530584 \text{ lbs/day, Daily Max} + 0.689351 \text{ lbs/day, Daily Max}$$

$$\text{Daily Max} = 1.22 \text{ lbs/day}$$

***Internal Outfall 30A** - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment).

PPG Industries, Inc. Industrial Chemicals, Lake Charles Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

Guideline

Organic Chemicals, Plastics,
and Synthetic Fibers

Reference

40 CFR 414
Subparts (F, G, and I)

Inorganic Chemicals-
Chlor Alkali

40 CFR 415.60
Subpart F

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(ug/L)</u>	<u>DAILY MAXIMUM</u> <u>(ug/L)</u>
Flow (MGD)	Report	Report
TOC	Report	50 mg/L
Oil & Grease	Report	15 mg/L
Acrylonitrile	Report	Report
Benzene	Report	Report
Carbon Tetrachloride	Report	Report
Chlorobenzene	Report	Report
Chloroethane	Report	Report
Chloroform	Report	Report
1,1-Dichloroethane	Report	Report
1,2-Dichloroethane	Report	Report
1,1-Dichloroethylene	Report	Report
1,2-trans-Dichloroethylene	Report	Report
1,2-Dichloropropane	Report	Report
1,3-Dichloropropylene	Report	Report
Ethylbenzene	Report	Report
Methyl Chloride	Report	Report
Methylene Chloride	Report	Report
Tetrachloroethylene	Report	Report
Toluene	Report	Report
1,1,1-Trichloroethane	Report	Report
1,1,2-Trichloroethane	Report	Report
Trichloroethylene	Report	Report
Vinyl Chloride	Report	Report
2,4-Dimethylphenol	Report	Report
4,6-Dinitro-o-Cresol	Report	Report
2,4-Dinitrophenol	Report	Report
2-Nitrophenol	Report	Report

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(ug/L)</u>	<u>DAILY MAXIMUM</u> <u>(ug/L)</u>
4-Nitrophenol	Report	Report
Phenol	Report	Report
Acenaphthene	Report	Report
Acenaphthylene	Report	Report
Anthracene	Report	Report
Benzo (a) anthracene	Report	Report
Benzo (a) pyrene	Report	Report
3,4-Benzofluoranthene	Report	Report
Benzo(k)fluoranthene	Report	Report
Bis(2-ethylhexyl)phthalate	Report	Report
Chrysene	Report	Report
1,2-Dichlorobenzene	Report	Report
1,3-Dichlorobenzene	Report	Report
1,4-Dichlorobenzene	Report	Report
Diethyl phthalate	Report	Report
Dimethyl phthalate	Report	Report
Di-n-butyl phthalate	Report	Report
Fluoranthene	Report	Report
Fluorene	Report	Report
Hexachloroethane	Report	Report
Hexachlorobenzene	Report	Report
Hexachlorbutadiene	Report	Report
Naphthalene	Report	Report
Nitrobenzene	Report	Report
Phenanthrene	Report	Report
Pyrene	Report	Report
1,2,4-Trichlorobenzene	Report	Report

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Site-Specific Consideration(s)

This outfall is intermittent in nature and will only receive post first flush stormwater discharges occurring after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment. The OCPSF and Inorganic Guideline parameters are not expected to be present at treatable levels in this wastewater. However, since there is no added treatment, report only requirements have been established for the parameters identified at Internal Outfall 20A to determine the pollutant levels from this outfall. This requirement was partially retained from the current modified permit effective on July 1, 1991.

Flow - established in accordance with LAC 33:IX.2707.I.1.b.

TOC and Oil & Grease - limitations established in accordance with general conditions of the Multi-Sector General Permit for Industrial Stormwater Discharges, LAR050000.

Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)-phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene, Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene - OCPSF and Inorganic Guideline Parameters under 40 CFR Part 414 and 40 CFR Part 415.60 were applied to the discharges from this outfall. This outfall contains post first flush stormwater and is expected to discharge infrequently (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment), therefore, monitoring and reporting only has been established at this outfall.

***Outfall 001, Mercury Cell Closure In Transition, When Outfall 001 is Discharging to the Main Stem of the Calcasieu River (Phases I-III)** - the discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; sulfuric acid stripper water; evaporator area pump seal water; HCL area pump seal water; and discharges from Internal Outfalls 101, 201, and 301.

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Flow	Report	Report (continuous recording)
pH, Std. Units	Report	Report (continuous recording)
BOD ₅	8689	18579
Temperature (°F)	---	Report
1,1,1,2-Tetrachloroethane	---	Report
1,1,2-Trichloroethane	---	Report
1,1-Dichloroethene	---	Report
1,2-Dichloroethane	---	Report
1,2-Dichloroethene	---	Report
1,2-Dichloropropane	---	Report
Benzene	---	Report
Bis(2-chloroethyl)Ether	---	Report
Bis(2-ethylhexyl)phthalate	---	Report
Carbon Tetrachloride	---	Report
Chlorobenzene	---	Report
Chloroform	---	Report
Cis-1,2- Dichloroethene	---	Report
Dichloromethane	---	Report
Hexachloroethane	---	Report
Naphthalene	---	Report
Pentachlorophenol	---	Report
Phenol	---	Report
Tetrachloroethene	---	Report
Thallium	---	Report
Trichloroethene	---	Report
Vinyl Chloride	---	Report

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Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b. There are two sampling locations for flow. The continuous requirement applies to both locations and will be reported as the arithmetic sum of Flow Locations No. 1 and No. 2.

PH - established in accordance with LAC 33:IX.1113.C.1.

BOD₅ - Monthly Average and Daily Maximum limitations for BOD₅ have been established to ensure compliance with the OCPSF Guidelines under 40 CFR Part 414 for Internal Outfall 20A. Limitations were established as part of the final outfall due to sample interference from inorganic sources at the internal outfall. Allocations were also assigned to account for contributions from Internal Outfall 101.

Temperature - Daily Maximum Reporting requirements established in the current modified permit, effective on July 1, 1991, have been retained.

PPG Industries requested to add monitor and report requirements for Risk Evaluation and Corrective Action Program (RECAP) parameters. LAC 33:I. Chapter 13 defines "surface waters" as excluding certain on-site ditches. The definition in RECAP states; "Ditches that are part of a treatment system shall not be considered surface water provided that the treatment system is monitored downstream of an impacted area for the [constituents of concern] under the terms of an LPDES permit. Under the RECAP Program, the LDEQ Environmental Remediation Group has identified several constituents of concern. Therefore, to ensure that the PPG Canal meets the above exclusion, and to demonstrate that such potential constituents are monitored, this request has been granted.

Therefore, monitoring requirements have been established for the following pollutants 1,1,2,2-Tetrachloroethane (TMDL parameter for Bayou D'Inde), 1,1,2-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloroethene, 1,2-Dichloropropane, Benzene, Bis(2-chloroethyl)Ether, Bis(2-ethylhexyl)phthalate, Bromoform (TMDL parameter for Bayou D'Inde), Carbon Tetrachloride, Chlorobenzene, Chloroform, Cis-1,2-Dichloroethene, Dichloromethane, Hexachloroethane, Naphthalene, Pentachlorophenol, Phenol, Tetrachloroethene, Total Thallium, Trichloroethene, and Vinyl Chloride.

INTERNAL OUTFALLS TO OUTFALL 001 INCLUDE 101, 201, AND 301

***Internal Outfall 101 (Phases I-II)** - the discharge of wastewater from the decommissioning of the Mercury Cell and associated activities; process wastewater from Membrane Cell portion of Plant A including HCL tank vent scrubber effluent, acid and soda ash storage areas process wastewater, and wastewater from the sulfuric acid stripper, membrane cell room floor drains, and pump seal water from evaporator or HCL area; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and

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C; process wastewater from brine solid treatment portion of Plant A; once through non-contact cooling water from Diaphragm Cells; and low contamination potential stormwater runoff.

PPG Industries, Inc. Industrial Chemicals, Lake Charles Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

<u>Guideline</u>	<u>Reference</u>
Inorganic Chemicals- Chlor Alkali	40 CFR 415.60 Subpart F

Calculations and basis of permit limitations are found at Appendix A-4 and associated appendices. See below for site-specific considerations.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Flow	Report	Report (continuous recording)
TSS	1983	4277
Total Residual Chlorine	30.7	50.5
Total Lead	9.33	22.94
Total Nickel	14.39	37.71
Total Copper(*)	19.05	46.66
Total Mercury(*)	0.14	0.33

(*) The listed values are technology based limitations. However, these are also TMDL Parameters, with water quality based limitations that become effective on June 13, 2008 (to be addressed in Section IX.C).

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b. There are four sampling locations for flow. The continuous requirement applies to all locations and will be reported as the sum of Flow Locations No. 1, No.2, No.3 and No. 4.

BOD₅ - Limitations established in accordance with the Inorganic Guidelines at 40 CFR Part 415. Calculated limitations will be established at Final Outfall 001.

Total Copper, Total Lead, Total Nickel, Total Mercury, Total Residual Chlorine - Limitations established in accordance with the Inorganic Guidelines at 40 CFR Part 415.

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***Internal Outfall 201 (Phases I-II)** -the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.

PPG Industries, Inc. Industrial Chemicals, Lake Charles Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

<u>Guideline</u>	<u>Reference</u>
Organic Chemicals, Plastics, and Synthetic Fibers	40 CFR 414 Subparts (F ,G, and I)
Inorganic Chemicals- Chlor Alkali	40 CFR 415.60 Subpart F

Calculations and basis of permit limitations are found at Appendix A-5 and associated appendices. See below for site-specific considerations.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(lbs/day)</u>	<u>DAILY MAXIMUM</u> <u>(lbs/day)</u>
Flow (MGD)	Report	Report (continuous recording)
TSS	4678	13821
Total Residual Chlorine	28.8	47.3
Total Lead	12.35	29.28
Total Nickel	32.55	80.26
Total Zinc	27.37	36.53
Total Copper	34.21(*)	81.86(*)
Acrylonitrile	1.46	3.59
Benzene	0.88	2.08
Carbon Tetrachloride	2.20	5.89
Chlorobenzene	2.20	5.89

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (lbs/day)</u>	<u>DAILY MAXIMUM (lbs/day)</u>
Chloroethane	1.70	4.57
Chloroform	1.72	5.04
1,1-Dichloroethane	0.34	0.91
1,2-Dichloroethane	2.79	8.89
1,1-Dichloroethylene	0.34	0.93
1,2-trans-Dichloroethylene	0.39	1.02
1,2-Dichloropropane	3.04	12.30
1,3-Dichloropropylyene	3.04	12.30
Ethylbenzene	2.20	5.89
Methyl Chloride	1.70	4.57
Methylene Chloride	0.56	2.63
Tetrachloroethylene	0.81	2.54
Toluene	0.43	1.15
1,1,1-Trichloroethane	0.34	0.91
1,1,2-Trichloroethane	0.50	1.97
Trichloroethylene	0.40	1.07
Vinyl Chloride	1.50	2.66
2,4-Dimethylphenol	0.29	0.73
4,6-Dinitro-o-Cresol	1.21	4.29
2,4-Dinitrophenol	18.70	66.48
2-Nitrophenol	1.01	3.58
4-Nitrophenol	2.51	8.92
Phenol	0.80	1.22
Acenaphthene	0.29	0.73
Acenaphthylene	0.29	0.73
Anthracene	0.29	0.73
Benzo (a) anthracene	0.29	0.73
Benzo (a) pyrene	0.31	0.74

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (lbs/day)</u>	<u>DAILY MAXIMUM (lbs/day)</u>
3,4-Benzofluoranthene	0.31	0.74
Benzo(k)fluoranthene	0.29	0.73
Bis(2-ethylhexyl)phthalate	1.47	4.00
Chrysene	0.29	0.73
1,2-Dichlorobenzene	3.04	12.30
1,3-Dichlorobenzene	2.20	5.89
1,4-Dichlorobenzene	2.20	5.89
Diethyl phthalate	0.71	1.75
Dimethyl phthalate	0.29	0.73
Di-n-butyl phthalate	0.31	0.67
Fluoranthene	0.34	0.84
Fluorene	0.29	0.73
Hexachloroethane	3.04	12.30
Hexachlorobenzene	3.04(*)	12.30(*)
Hexachlorbutadiene	2.20(*)	5.89(*)
Naphthalene	0.29	0.73
Nitrobenzene	34.66	99.18
Phenanthrene	0.29	0.73
Pyrene	0.31	0.74
1,2,4-Trichlorobenzene	3.04	12.30

(*) The listed values are technology based limitations. However, these are also TMDL Parameters, with water quality based limitations that become effective on June 13, 2008 (to be addressed in Section IX.C).

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b. There are two sampling locations for flow. The continuous requirement applies to both locations and will be reported as the arithmetic sum of Flow Locations No. 1 and No. 2.

BOD₅ - Limitations established in accordance with the OCPSF and Inorganic Guidelines at 40 CFR Part 414 and 415, respectively. Calculated limitations will be established at Final Outfall B01.

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Total Lead, Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)-phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene, Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene - OCPSF and Inorganic Guidelines under 40 CFR Part 414 and 40 CFR Part 415.60 were applied to the discharges from this outfall.

Zinc - Zinc is an OCPSF parameter with BAT treatment concentrations of 1.05 mg/L, Monthly Average and 2.61 mg/L, Daily Maximum. These BAT treatment concentrations combined with PPG's metal bearing OCPSF discharge flow results in a discharge allocation of 3.191 lbs/day, Monthly Average and 7.933 lbs/day, Daily Maximum. PPG does not have a suitable sample location for the OCPSF metals bearing stream; however a composite sampler is currently in use on the combined metals and non-metals discharge (Outfall 20A, Sample Location No. 2). Samples collected at Outfall 201, Locations No. 1 and No. 2 indicated additional sources of Zinc not related to OCPSF activity are present. Therefore, Zinc limitations were established in accordance with the OCPSF Guidelines at 40 CFR Part 414 with additional allocation for the Non-OCPSF non-metals bearing wastewater. The same BAT treatment loadings of 3.191 lbs/day, Monthly Average and 7.933 lbs/day, Daily Maximum are proposed to be used for the additional allocation and are applied based on Best Professional Judgment.

Phenol - During discussions between LDEQ and PPG Industries held on May 23, 2006, and June 7, 2006, PPG Industries indicated that OCPSF Guideline limitations would not be achievable due to Non-OCPSF sources (groundwater remediation wastewater originating from the South Terminal) contributing to this outfall. After careful review of 26 concurrent samples taken at the outfall and from a location near the South Terminal, LDEQ concurs that the OCPSF allocation alone is insufficient. Since there is known technology available for phenol treatment, LDEQ and EPA Region VI agreed that a fifty percent (50%) reduction in the phenol loading from the South Terminal is reasonably achievable. Therefore, phenol limitations were established in accordance with the OCPSF Guidelines at 40 CFR Part 414 with additional allocation for the Non-OCPSF groundwater remediation wastewater, based on Best Professional Judgment.

PPG Industries proposed a Monthly Average value of 1.04 lbs/day (95th percentile) and a Daily Maximum value of 1.22 lbs/day (99th percentile) for phenol at this outfall, based on discussions of a 50% reduction at the South Terminal.

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CONTRIBUTING SOURCES	FLOW (MGD)	MASS LBS/DAY		CONCENTRATION MG/L	
		Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
OCPSF Guideline 40 CFR Part 414 (See Appendix A for calculation)	1.3536	0.214491	0.530584	0.019	0.047
South Terminal (S.T.) BPJ	0.504	0.587644	0.689351	0.139803	0.164

The following calculations were used to establish limitations:

1.219935 lbs/day - OCPSF Guideline lbs/day, Daily Max=S.T. lbs/day, Daily Max

1.219935 lbs/day - 0.530584 lbs/day, Daily Max=0.689351 lbs/day, Daily Max

Generic Equations:

$$\text{mg/L} = \frac{\text{lbs/day}}{\text{Flow, MGD} \times 8.34 \text{ lbs/gal}}$$

$$\text{lbs/day} = \text{mg/L} \times \text{Flow, MGD} \times 8.34 \text{ lbs/gal}$$

$$\text{Monthly Average, mg/L} = \frac{\text{Proposed Average, lbs/day} \times \text{Daily Maximum, mg/L}}{\text{Proposed Maximum, lbs/day}}$$

South Terminal Daily Maximum []:

$$\text{mg/L} = \frac{0.689351 \text{ lbs/day}}{0.504 \text{ MGD} \times 8.34 \text{ lbs/gal}}$$

$$\text{mg/L} = 0.164$$

South Terminal Daily Maximum Mass:

$$\text{lbs/day} = 0.164 \text{ mg/L} \times 0.504 \text{ MGD} \times 8.34 \text{ lbs/gal}$$

$$\text{lbs/day} = 0.689351$$

The value for the Monthly Average [] was derived using the ratio of the Monthly Average and Daily Maximum Values as proposed by PPG Industries.

South Terminal Monthly Average []:

$$\text{mg/L} = \frac{1.04 \text{ lbs/day} \times 0.164 \text{ mg/L}}{1.22 \text{ lbs/day}}$$

$$\text{mg/L} = 0.139803$$

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South Terminal Monthly Average Mass:

$$\text{lbs/day} = 0.1398 \text{ mg/L} \times 0.504 \text{ MGD} \times 8.34 \text{ lbs/gal}$$

$$\text{lbs/day} = 0.587644$$

Outfall 201 Phenol Limitations:

Monthly Avg = OCPSF lbs/day, Monthly Avg + S.T. lbs/day, Monthly Avg
Monthly Avg = 0.214491 lbs/day, Monthly Avg + 0.587644 lbs/day, Monthly Avg
Monthly Avg = 0.80 lbs/day

Daily Max = OCPSF lbs/day, Daily Max + S.T. lbs/day, Daily Max
Daily Max = 0.530584 lbs/day, Daily Max + 0.689351 lbs/day, Daily Max
Daily Max = 1.22 lbs/day

***Internal Outfall 301** - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment).

PPG Industries, Inc. Industrial Chemicals, Lake Charles Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

<u>Guideline</u>	<u>Reference</u>
Organic Chemicals, Plastics, and Synthetic Fibers	40 CFR 414 Subparts (F ,G, and I)
Inorganic Chemicals- Chlor Alkali	40 CFR 415.60 Subpart F

PARAMETER	MONTHLY AVERAGE (ug/L)	DAILY MAXIMUM (ug/L)
Flow (MGD)	Report	Report
TOC	Report	50 mg/L
Oil & Grease	Report	15 mg/L
Acrylonitrile	Report	Report
Benzene	Report	Report
Carbon Tetrachloride	Report	Report
Chlorobenzene	Report	Report
Chloroethane	Report	Report
Chloroform	Report	Report

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(ug/L)</u>	<u>DAILY MAXIMUM</u> <u>(ug/L)</u>
1,1-Dichloroethane	Report	Report
1,2-Dichloroethane	Report	Report
1,1-Dichloroethylene	Report	Report
1,2-trans-Dichloroethylene	Report	Report
1,2-Dichloropropane	Report	Report
1,3-Dichloropropylene	Report	Report
Ethylbenzene	Report	Report
Methyl Chloride	Report	Report
Methylene Chloride	Report	Report
Tetrachloroethylene	Report	Report
Toluene	Report	Report
1,1,1-Trichloroethane	Report	Report
1,1,2-Trichloroethane	Report	Report
Trichloroethylene	Report	Report
Vinyl Chloride	Report	Report
2,4-Dimethylphenol	Report	Report
4,6-Dinitro-o-Cresol	Report	Report
2,4-Dinitrophenol	Report	Report
2-Nitrophenol	Report	Report
4-Nitrophenol	Report	Report
Phenol	Report	Report
Acenaphthene	Report	Report
Acenaphthylene	Report	Report
Anthracene	Report	Report
Benzo (a) anthracene	Report	Report
Benzo (a) pyrene	Report	Report
3,4-Benzofluoranthene	Report	Report
Benzo(k)fluoranthene	Report	Report

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> (ug/L)	<u>DAILY MAXIMUM</u> (ug/L)
Bis(2-ethylhexyl)phthalate	Report	Report
Chrysene	Report	Report
1,2-Dichlorobenzene	Report	Report
1,3-Dichlorobenzene	Report	Report
1,4-Dichlorobenzene	Report	Report
Diethyl phthalate	Report	Report
Dimethyl phthalate	Report	Report
Di-n-butyl phthalate	Report	Report
Fluoranthene	Report	Report
Fluorene	Report	Report
Hexachloroethane	Report	Report
Hexachlorobenzene	Report	Report
Hexachlorobutadiene	Report	Report
Naphthalene	Report	Report
Nitrobenzene	Report	Report
Phenanthrene	Report	Report
Pyrene	Report	Report
1,2,4-Trichlorobenzene	Report	Report

Site-Specific Consideration(s)

This outfall is intermittent in nature and will **only** receive post first flush stormwater discharges occurring after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment. The OCPSF and Inorganic **Guideline** parameters are not expected to be present at treatable levels in **this wastewater**. However, since there is no added treatment, report only requirements have been established for the parameters identified at Internal Outfall **201** to determine the pollutant levels from this outfall. This requirement was **partially** retained from the current modified permit effective on July 1, 1991.

Flow - established in accordance with LAC 33:IX.2707.1.1.b.

TOC and Oil & Grease - limitations established in accordance with general conditions of the Multi-Sector General Permit for Industrial Stormwater

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Discharges, LAR050000.

Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)-phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene, Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene - OCPSF and Inorganic Guideline Parameters under 40 CFR Part 414 and 40 CFR Part 415.60 were applied to the discharges from this outfall. This outfall contains post first flush stormwater and is expected to discharge infrequently (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment), therefore, monitoring and reporting only has been established at this outfall.

2. Outfalls 002 and 004 - Stormwater & Utility Wastewaters

***Outfall 002** - the discharge of stormwater runoff from Plant A; steam condensate from Diaphragm Cell Chlor/Alkali production (Plant A); once through non-contact cooling water from Plant A; treated bilge water from barge transport vehicle; potential groundwater intrusion; and intermittent discharges of firewater and from condensate piping.

Utility wastewaters & stormwater runoff being discharged to discrete outfalls receive BPJ limitations/monitoring requirements according to the following schedule:

<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> (Mg/L)	<u>DAILY MAXIMUM</u> (Mg/L)
Flow (MGD)	Report	Report
TOC	---	50
Oil & Grease	---	15
PH (standard units)	6.0	9.0

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b.

PH - established in accordance with LAC 33:IX.1113.C.1.

TOC and Oil & Grease - limitations established in accordance with the MSGP for Industrial Stormwater Discharges, LAR050000 and Best Professional Judgment.

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***Outfall 004** - the discharge of once through non-contact cooling water from Plant A chlorine/caustic facility; wash down from car including car wash; cooling tower blowdown; intermittent discharges from condensate piping and acid tank scrubber discharge; and storm water runoff from caustic storage, chlorine liquefaction, and brine treatment areas.

Utility wastewaters & stormwater runoff being discharged to discrete outfalls receive BPJ limitations/monitoring requirements according to the following schedule:

PARAMETER	MONTHLY AVERAGE (Mg/L)	DAILY MAXIMUM (Mg/L)
Flow (MGD)	Report	Report (continuous recorder)
TSS	---	45
TOC	---	50
Oil & Grease	---	15
PH (standard units)	6.0	9.0 (continuous recorder)

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b.

PH - established in accordance with LAC 33:IX.1113.C.1.

TOC and Oil & Grease - limitations established in accordance with the MSGP for Industrial Stormwater Discharges, LAR050000 and Best Professional Judgment.

TSS - limitation established due to washwater discharges. The Daily maximum limitation of 45 mg/L is consistent with the limitation established in the Light Commercial General Permit (LAG480000) for similar discharges.

In accordance with LAC 33:IX.2707.I.3 and 4 [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2522.B.14 [40 CFR 122.26(b)(14)].

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C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. Calculations, results, and documentation are given in Appendix B.

In accordance with LAC 33:IX.2707.D.1/40 CFR § 122.44(d)(1), the existing (or potential) discharge (s) was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001, to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix B.

The following pollutants received water quality based effluent limits:

POLLUTANT(S)
Total Nickel
Total Copper
Total Mercury
PCB-1254
Hexachlorobutadiene
Hexachlorobenzene
Bromoform
1,1,2,2-Tetrachloroethane
1,1-Dichloroethylene
Benzo(a)anthracene
Benzo(a)pyrene

1. Outfalls A01, B01, 001, 10A, 10B, 101, 20A, 201, 30A, and 301 - Process Wastewaters

***Outfall A01, Mercury Cell in Operation (Bayou D'Inde Location)** - the discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection,

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condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; and discharges from Internal Outfalls 10A, 20A, and 30A.

Outfall A01, Phase I - (Pre TMDL and Other Water Quality (Non-TMDL) Requirements)

The following requirements are effective starting on the effective date of the permit and expire upon Outfall A01 Phase II start up (June 12, 2008), the move to Outfall B01 for the Mercury Cell Closure Transition, or the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Nickel	Report	Report
1,1-Dichloroethylene	Report	Report
Total Copper	---	Report (*)
Total Mercury	---	Report (*)
PCB-1254	---	Report (*)
Hexachlorobutadiene	0.06752	0.20256
Hexachlorobenzene	0.00010	0.00034
Bromoform	41	81
1,1,2,2-Tetrachlorethane	---	Report(*)

(*) These are TMDL parameters. The reported value for these parameters shall be the arithmetic sum of the corresponding parameters at Internal Outfall 10A (Phase I) and 20A (Phase I).

Site-Specific Consideration(s)

Total Nickel and 1,1-Dichloroethylene - Non-TMDL Water Quality Based Effluent Limitations. In accordance with LAC 33:IX.1109.D.1, reporting requirements have been established during Phase I to give PPG Industries time to come into compliance with Water Quality Standards.

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane - These parameters have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002. Report and monitor only requirements are applied until June 12, 2008.

Hexachlorobenzene, Hexachlorobutadiene, and Bromoform- originally established based on water quality concerns therefore, the Monthly Average and Daily Maximum mass limitations have been retained from the current modified NPDES permit, effective on July 1, 1991. These parameters are also included in the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

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Outfall A01, Phase II - (Post TMDL and Pre Other Water Quality (Non-TMDL) Requirements)

The following requirements are effective upon startup of Outfall A01 Phase II beginning on June 13, 2008 and are valid until the move to Outfall A01 Phase III, three years after the effective date of the permit; or the startup of Outfall B01 for the Mercury Cell Closure Transition; or the startup of the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Nickel	Report	Report
1,1-Dichloroethylene	Report	Report
Total Copper	---	1.240000(*)
Total Mercury	---	0.008540(*)
PCB-1254	---	0.0000124(*)
Hexachlorobutadiene	---	0.132000(*)
Hexachlorobenzene	---	0.000310(*)
Bromoform	---	43.000000(*)
1,1,2,2-Tetrachlorethane	---	2.230000(*)

(*) These are TMDL parameters. The reported value for these parameters shall be the arithmetic sum of the corresponding parameters at Internal Outfall 10A (Phase II) and 20A (Phase II).

Site-Specific Consideration(s)

Total Nickel and 1,1-Dichloroethylene - Non-TMDL Water Quality Based Effluent Limitations. In accordance with LAC 33:IX.1109.D.1, reporting requirements have been established during Phase II to give PPG Industries time to come into compliance with Water Quality Standards.

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - These limitations have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

SITE-SPECIFIC MQLS

Final Outfall and associated internal outfalls - To protect against the potential for discharges of the Bayou D'Inde TMDL pollutants, copper, mercury, hexachlorobenzene, hexachlorobutadiene, and pcb-1254 at levels above that of state water quality standards, and for discharges of copper, mercury, hexachlorobenzene, hexachlorobutadiene, and pcb-1254 at levels exceeding state water quality standards, site specific MQL's were developed for these parameters. (See Part II.J).

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$$\text{MQL (mg/L)} = \frac{\text{TMDL assigned Loading for Chemical X}}{\text{Flow used in TMDL} \times 8.34 \text{ conversion factor}}$$

$$\text{MQL } (\mu\text{g/L}) = \text{MQL (mg/L)} \times 1000$$

PARAMETERS	COMBINED TMDL LOADING FOR INTERNAL OUTFALLS 101 and 201 (LBS/DAY)	FLOW (MGD)	CONVERSION FACTOR	MQL DETECTION LIMIT $\mu\text{g/L}$
Copper	1.240000 (*)	16.297	8.34	9.12
Mercury	0.008540	16.297	8.34	0.0628
PCB -1254	0.000012	16.297	8.34	0.000088
Hexachlorobenzene	0.000310	16.297	8.34	0.00228
Hexachlorobutadiene	0.132000	16.297	8.34	0.97118

(*) TMDL document erroneously listed the Daily Maximum Total Copper loading as 0.730000 lbs/day in Table 15 of the Calcasieu Toxics TMDL for Subsegment 030901. EPA, Region VI indicated that the correct Waste Load Allocation (WLA) for Total Copper was calculated in Appendix E (Table E-12) of the Calcasieu Toxics TMDL using the following equation:

$$\text{WLA} = \text{Facility Process Flow Used in the TMDL} \times \text{The Assimilative Capacity Load}$$

PARAMETER	FACILITY PROCESS FLOW (MGD)	ASSIMILATIVE CAPACITY LOAD PER MGD OF PROCESS Flow (PPD/MGD)	ASSIMILATIVE CAPACITY WLA POUND PER DAY (PPD)
Copper	16.297	0.0762	1.240000

Outfall A01, Phase III - (Post TMDL and Other Water Quality (Non-TMDL) Requirements)

The following requirements are effective upon startup of Outfall A01 Phase III, three years from the effective date of the permit and are valid until the startup of Outfall B01 for the Mercury Cell Closure Transition; or the startup of Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River; or the expiration date.

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Nickel	13.59510	32.27539
1,1-Dichloroethylene	2.204345	5.246342
Total Copper	---	1.240000(*)
Total Mercury	---	0.008540(*)
PCB-1254	---	0.0000124(*)
Hexachlorobutadiene	---	0.132000(*)
Hexachlorobenzene	---	0.000310(*)
Bromoform	---	43.000000(*)
1,1,2,2-Tetrachlorethane	---	2.230000(*)

(*) These are TMDL parameters. The reported value for these parameters shall be the arithmetic sum of the corresponding parameters at Internal Outfall 10A (Phase II) and 20A (Phase II).

Site-Specific Consideration(s)

Total Nickel and 1,1-Dichloroethylene - Non-TMDL Water Quality Based Effluent Limitations.

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - These limitations have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

SITE-SPECIFIC MQLS

Final Outfall and associated internal outfalls - To protect against the potential for discharges of the Bayou D'Inde TMDL pollutants, copper, mercury, hexachlorobenzene, hexachlorobutadiene, and pcb-1254 at levels above that of state water quality standards, and for discharges of copper, mercury, hexachlorobenzene, hexachlorobutadiene, and pcb-1254 at levels exceeding state water quality standards, site specific MQL's were developed for these parameters. (See Part II.J).

$$\text{MQL (mg/L)} = \frac{\text{TMDL assigned Loading for Chemical X}}{\text{Flow used in TMDL} \times 8.34 \text{ conversion factor}}$$

$$\text{MQL } (\mu\text{g/L}) = \text{MQL (mg/L)} \times 1000$$

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PARAMETERS	COMBINED TMDL LOADING FOR INTERNAL OUTFALLS 101 and 201 (LBS/DAY)	FLOW (MGD)	CONVERSION FACTOR	MQL DETECTION LIMIT $\mu\text{g/L}$
Copper	1.240000 (*)	16.297	8.34	9.12
Mercury	0.008540	16.297	8.34	0.0628
PCB -1254	0.000012	16.297	8.34	0.000088
Hexachlorobenzene	0.000310	16.297	8.34	0.00228
Hexachlorobutadiene	0.132000	16.297	8.34	0.97118

(*) TMDL document erroneously listed the Daily Maximum Total Copper loading as 0.730000 lbs/day in Table 15 of the Calcasieu Toxics TMDL for Subsegment 030901. EPA, Region VI indicated that the correct Waste Load Allocation (WLA) for Total Copper was calculated in Appendix E (Table E-12) of the Calcasieu Toxics TMDL using the following equation:

WLA = Facility Process Flow Used in the TMDL x The Assimilative Capacity Load

PARAMETER	FACILITY PROCESS FLOW (MGD)	ASSIMILATIVE CAPACITY LOAD PER MGD OF PROCESS Flow (PPD/MGD)	ASSIMILATIVE CAPACITY WLA POUND PER DAY (PPD)
Copper	16.297	0.0762	1.240000

INTERNAL OUTFALLS TO OUTFALL A01 INCLUDE 10A, 20A, AND 30A

***Internal Outfall 10A** - the discharge of trace contamination process wastewater, treated process wastewater and stormwater from Mercury Cell Chlor/Alkali production facilities including cell room water, seal water, brine treatment solids, and brine purges; process wastewater from the mercury cell process trace including chlorinated condensate, spent sulfuric acid, chlorine seal water, and spent neutralizer caustic and hypochlorite; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; brine solid treatment portion of Plant

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A; once through non-contact cooling water; and low contamination potential stormwater runoff.

Outfall 10A Phase I - (Pre TMDL)

The following requirements are effective starting on the effective date of the permit and are valid until Outfall 10A Phase II start up (June 12, 2008), the move to Outfall 10B for the Mercury Cell Closure Transition, or the startup of Outfall 101 after the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	11.01	26.95
Total Mercury	0.14	0.33
PCB-1254	---	Report
Hexachlorobutadiene	---	Report
Hexachlorobenzene	---	Report
Bromoform	---	Report
1,1,2,2-Tetrachlorethane	---	Report

Site-Specific Consideration(s)

Total Copper and Total Mercury - limitations were established in accordance with the requirements of the Inorganic Guidelines at 40 CFR Part 415. These parameters were included under water quality requirements because they were also identified in the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - These reporting requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

Outfall 10A Phase II - (Post TMDL)

The following requirements are effective starting upon startup of Outfall 10A Phase II beginning on June 13, 2008 and are valid until the startup of Outfall 10B for the Mercury Cell Closure Transition; the startup of Outfall 101 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River; or permit expiration.

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	---	(*)
Total Mercury	---	(*)
PCB-1254	---	(*)
Hexachlorobutadiene	---	(*)
Hexachlorobenzene	---	(*)
Bromoform	---	(*)
1,1,2,2-Tetrachloroethane	---	(*)

(*) These parameters are required by the TMDL. The daily maximum loading shall be reported as the sum of Internal Outfall 10A (Phase II) and Internal Outfall 20A (Phase II). The sum shall not exceed the loading for the corresponding parameters at Final Outfall A01 (Phases II and III).

Site-Specific Consideration(s)

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - These requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

***Internal Outfall 20A** - the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.

Outfall 20A Phase I - (Pre TMDL)

The following requirements are effective starting on the effective date of the permit and are valid until the Outfall 20A Phase II start up (June 12, 2008) or the startup of Outfall 201 after the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	34.21	81.86
Total Mercury	---	Report
PCB-1254	---	Report
Hexachlorobutadiene	2.20	5.89
Hexachlorobenzene	3.04	12.30
Bromoform	---	Report
1,1,2,2-Tetrachlorethane	---	Report

Site-Specific Consideration(s)

Total Copper Hexachlorobenzene, and Hexachlorobutadiene - limitations were established in accordance with the requirements of the OCPSF and Inorganic Guidelines at 40 CFR Parts 414 and 415, respectively. These parameters were included under water quality requirements because they were also identified in the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, and Bromoform - These reporting requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

Outfall 20A Phase II - (Post TMDL)

The following requirements are effective upon startup of Outfall 20A Phase II beginning on June 13, 2008 and are valid until startup of Outfall 201 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River; or permit expiration.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	---	(*)
Total Mercury	---	(*)
PCB-1254	---	(*)
Hexachlorobutadiene	---	(*)
Hexachlorobenzene	---	(*)
Bromoform	---	(*)
1,1,2,2-Tetrachlorethane	---	(*)

(*) These parameters are required by the TMDL. The daily maximum loading shall be reported

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as the sum of Internal Outfall 10A (Phase II) and Internal Outfall 20A (Phase II). The sum shall not exceed the loading for the corresponding parameters at Final Outfall A01 (Phases II and III).

Site-Specific Consideration(s)

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - These requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

***Internal Outfall 30A** - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment).

The following schedule starts on the effective date of the permit and expires upon the startup of Outfall 301 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River, or expiration of the permit.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(μg/L)</u>	<u>DAILY MAXIMUM</u> <u>(μg/L)</u>
Total Copper	---	Report
Total Mercury	---	Report
PCB-1254	---	Report
Hexachlorobutadiene	---	Report
Hexachlorobenzene	---	Report
Bromoform	---	Report
1,1,2,2-Tetrachlorethane	---	Report

Site-Specific Consideration(s)

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - This outfall receives post first flush stormwater from Internal Outfall 20A or 201, therefore report and monitor only requirements have been established to ensure compliance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

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***Outfall B01, Mercury Cell Closure In Transition, (Bayou D'Inde Location)** - the continuous discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation(*3) and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; sulfuric acid stripper water; evaporator area pump seal water; HCL area pump seal water; and discharges from Internal Outfalls 10B, 20A, and 30A.

Outfall B01, Phase I - (Pre TMDL and Other Water Quality (Non-TMDL) Requirements)

The following requirements are effective upon the startup of Outfall B01 for the Mercury Cell Closure Transition prior to June 12, 2008 and are valid until the June 12, 2008 move into Outfall B01 Phase II; or the startup Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Nickel	Report	Report
1,1-Dichloroethylene	Report	Report
Total Copper	---	Report (*)
Total Mercury	---	Report (*)
PCB-1254	---	Report (*)
Hexachlorobutadiene	0.06752	0.20256
Hexachlorobenzene	0.00010	0.00034
Bromoform	41	81
1,1,2,2-Tetrachlorethane	---	Report(*)

(*) These are TMDL parameters. The reported value for these parameters shall be the arithmetic sum of the corresponding parameters at Internal Outfall 10B (Phase I) and 20A (Phase I).

Site-Specific Consideration(s)

Total Nickel and 1,1-Dichloroethylene - Non-TMDL Water Quality Based Effluent Limitations. In accordance with LAC 33:IX.1109.D.1, reporting requirements have been established during Phase I to give PPG Industries time to come into compliance with Water Quality Standards.

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Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane - These parameters have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002. Report and monitor only requirements are applied until June 12, 2008.

Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - originally established based on water quality concerns therefore, the Monthly Average and Daily Maximum mass limitations have been retained from the current modified NPDES permit, effective on July 1, 1991. These parameters are also included in the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

Outfall B01, Phase II - (Post TMDL and Pre Other Water Quality (Non-TMDL) Requirements)

The following requirements are effective upon startup of Outfall B01 Phase II beginning on June 13, 2008 and are valid until the move into Outfall B01 Phase III, three years after the effective date of the permit; or the startup Outfall 001 for relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

PARAMETER	MONTHLY AVERAGE (LBS/DAY)	DAILY MAXIMUM (LBS/DAY)
Total Nickel	Report	Report
1,1-Dichloroethylene	Report	Report
Total Copper	---	1.240000(*)
Total Mercury	---	0.008540(*)
PCB-1254	---	0.0000124(*)
Hexachlorobutadiene	---	0.132000(*)
Hexachlorobenzene	---	0.000310(*)
Bromoform	---	43.000000(*)
1,1,2,2-Tetrachlorethane	---	2.230000(*)

(*) These are TMDL parameters. The reported value for these parameters shall be the arithmetic sum of the corresponding parameters at Internal Outfall 10B (Phase II) and 20A (Phase II).

Site-Specific Consideration(s)

Total Nickel and 1,1-Dichloroethylene - Non-TMDL Water Quality Based Effluent Limitations. In accordance with LAC 33:IX.1109.D.1, reporting requirements have been established during Phase II to give PPG Industries time to come into compliance with Water Quality Standards.

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - These limitations have been established in accordance with the Upper Calcasieu Estuary TMDL for

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Bayou D'Inde issued in the Federal Register on June 13, 2002.

SITE-SPECIFIC MQLS

Final Outfall and associated internal outfalls - To protect against the potential for discharges of the Bayou D'Inde TMDL pollutants, copper, mercury, hexachlorobenzene, hexachlorobutadiene, and pcb-1254 at levels above that of state water quality standards, and for discharges of copper, mercury, hexachlorobenzene, hexachlorobutadiene, and pcb-1254 at levels exceeding state water quality standards, site specific MQL's were developed for these parameters. (See Part II.J).

$$\text{MQL (mg/L)} = \frac{\text{TMDL assigned Loading for Chemical X}}{\text{Flow used in TMDL} \times 8.34 \text{ conversion factor}}$$

$$\text{MQL } (\mu\text{g/L}) = \text{MQL (mg/L)} \times 1000$$

PARAMETERS	COMBINED TMDL LOADING FOR INTERNAL OUTFALLS 101 and 201 (LBS/DAY)	FLOW (MGD)	CONVERSION FACTOR	MQL DETECTION LIMIT $\mu\text{g/L}$
Copper	1.240000 (*)	16.297	8.34	9.12
Mercury	0.008540	16.297	8.34	0.0628
PCB -1254	0.000012	16.297	8.34	0.000088
Hexachlorobenzene	0.000310	16.297	8.34	0.00228
Hexachlorobutadiene	0.132000	16.297	8.34	0.97118

(*) TMDL document erroneously listed the Daily Maximum Total Copper loading as 0.730000 lbs/day in Table 15 of the Calcasieu Toxics TMDL for Subsegment 030901. EPA, Region VI indicated that the correct Waste Load Allocation (WLA) for Total Copper was calculated in Appendix E (Table E-12) of the Calcasieu Toxics TMDL using the following equation:

$$\text{WLA} = \text{Facility Process Flow Used in the TMDL} \times \text{The Assimilative Capacity Load}$$

PARAMETER	FACILITY PROCESS FLOW (MGD)	ASSIMILATIVE CAPACITY LOAD PER MGD OF PROCESS Flow (PPD/MGD)	ASSIMILATIVE CAPACITY WLA POUND PER DAY (PPD)
Copper	16.297	0.0762	1.240000

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Outfall B01, Phase III - (Post TMDL and Other Water Quality (Non-TMDL) Requirements)

The following requirements are effective upon **startup** of Outfall B01 Phase III, three years from the effective date of the permit **and** are valid until the startup Outfall 001 after the relocation from Bayou D'Inde to the Main Stem of the Calcasieu River or the expiration of the permit

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Nickel	13.59510	32.27539
1,1-Dichloroethylene	2.204345	5.246342
Total Copper	---	1.240000(*)
Total Mercury	---	0.008540(*)
PCB-1254	---	0.0000124(*)
Hexachlorobutadiene	---	0.132000(*)
Hexachlorobenzene	---	0.000310(*)
Bromoform	---	43.000000(*)
1,1,2,2-Tetrachlorethane	---	2.230000(*)

(*) These are TMDL parameters. The reported value for these parameters shall be the arithmetic sum of the corresponding parameters at Internal Outfall 10B (Phase II) and 20A (Phase II).

Site-Specific Consideration(s)

Total Nickel and 1,1-Dichloroethylene - Non-TMDL Water Quality Based Effluent Limitations.

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - These limitations have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

SITE-SPECIFIC MQLS

Final Outfall and associated internal outfalls - To protect against the potential for discharges of the Bayou D'Inde TMDL pollutants, copper, mercury, hexachlorobenzene, hexachlorobutadiene, and ~~pcb~~-1254 at levels above that of state water quality standards, and for discharges of copper, mercury, hexachlorobenzene, hexachlorobutadiene, and ~~pcb~~-1254 at levels exceeding state water quality standards, site specific MQL's were developed for these parameters. (See Part II.J).

MQL (mg/L) = $\frac{\text{TMDL assigned Loading for Chemical X}}{\text{Flow used in TMDL} \times 8.34 \text{ conversion factor}}$

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$$\text{MQL } (\mu\text{g/L}) = \text{MQL } (\text{mg/L}) \times 1000$$

PARAMETERS	COMBINED TMDL LOADING FOR INTERNAL OUTFALLS 101 and 201 (LBS/DAY)	FLOW (MGD)	CONVERSION FACTOR	MQL DETECTION LIMIT $\mu\text{g/L}$
Copper	1.240000 (*)	16.297	8.34	9.12
Mercury	0.008540	16.297	8.34	0.0628
PCB -1254	0.000012	16.297	8.34	0.000088
Hexachlorobenzene	0.000310	16.297	8.34	0.00228
Hexachlorobutadiene	0.132000	16.297	8.34	0.97118

(*) TMDL document erroneously listed the Daily Maximum Total Copper loading as 0.730000 lbs/day in Table 15 of the Calcasieu Toxics TMDL for Subsegment 030901. EPA, Region VI indicated that the correct Waste Load Allocation (WLA) for Total Copper was calculated in Appendix E (Table E-12) of the Calcasieu Toxics TMDL using the following equation:

$$\text{WLA} = \text{Facility Process Flow Used in the TMDL} \times \text{The Assimilative Capacity Load}$$

PARAMETER	FACILITY PROCESS FLOW (MGD)	ASSIMILATIVE CAPACITY LOAD PER MGD OF PROCESS Flow (PPD/MGD)	ASSIMILATIVE CAPACITY WLA POUND PER DAY (PPD)
Copper	16.297	0.0762	1.240000

INTERNAL OUTFALLS TO OUTFALL B01 INCLUDE 10B, 20A, AND 30A

***Internal Outfall 10B** - the continuous discharge of wastewater from the decommissioning of the Mercury Cell and associated activities; process wastewater from Membrane Cell portion of Plant A including HCL tank vent scrubber effluent, acid and soda ash storage areas process wastewater, and wastewater from the sulfuric acid stripper, membrane cell room floor drains, and pump seal water from evaporator or HCL area; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process

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area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; process wastewater from brine solid treatment portion of Plant A; once through non-contact cooling water from Diaphragm Cells; and low contamination potential stormwater runoff.

Outfall 10B Phase I - (Pre TMDL)

The following requirements are effective starting upon the startup of Outfall 10B for the Mercury Cell Closure Transition prior to June 12, 2008 and are valid until the June 12, 2008 move into Outfall 10B Phase II; or the startup Outfall 101 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	19.05	46.66
Total Mercury	0.14	0.33
PCB-1254	---	Report
Hexachlorobutadiene	---	Report
Hexachlorobenzene	---	Report
Bromoform	---	Report
1,1,2,2-Tetrachlorethane	---	Report

Site-Specific Consideration(s)

Total Copper and Total Mercury - limitations were established in accordance with the requirements of the Inorganic Guidelines at 40 CFR Part 415. These parameters were included under water quality requirements because they were also identified in the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - These reporting requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

Outfall 10B Phase II - (Post TMDL)

The following requirements are effective upon startup of Outfall 10B Phase II beginning on June 13, 2008 and are valid until the startup of Outfall 101 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River; or permit expiration.

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	---	(*)
Total Mercury	---	(*)
PCB-1254	---	(*)
Hexachlorobutadiene	---	(*)
Hexachlorobenzene	---	(*)
Bromoform	---	(*)
1,1,2,2-Tetrachloroethane	---	(*)

(*) These parameters are required by the TMDL. The daily maximum loading shall be reported as the sum of Internal Outfall 10B (Phase II) and Internal Outfall 20A (Phase II). The sum shall not exceed the loading for the corresponding parameters at Final Outfall A01 (Phases II and III).

Site-Specific Consideration(s)

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - These requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

***Internal Outfall 20A** - the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.

Outfall 20A Phase I - (Pre TMDL)

The following requirements are effective starting on the effective date of the permit and lasting until Outfall 20A Phase II start up (June 12, 2008) or the startup of Outfall 201 after the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	34.21	81.86
Total Mercury	---	Report

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
PCB-1254	---	Report
Hexachlorobutadiene	2.20	5.89
Hexachlorobenzene	3.04	12.30
Bromoform	---	Report
1,1,2,2-Tetrachlorethane	---	Report

Site-Specific Consideration(s)

Total Copper Hexachlorobenzene, and Hexachlorobutadiene - limitations were established in accordance with the requirements of the OCPSF and Inorganic Guidelines at 40 CFR Parts 414 and 415, respectively. These parameters were included under water quality requirements because they were also identified in the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, and Bromoform - These reporting requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

Outfall 20A Phase II - (Post TMDL)

The following requirements are effective upon startup of Outfall 20A Phase II beginning on June 13, 2008 and lasting until startup of Outfall 201 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River; or permit expiration.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	---	(*)
Total Mercury	---	(*)
PCB-1254	---	(*)
Hexachlorobutadiene	---	(*)
Hexachlorobenzene	---	(*)
Bromoform	---	(*)
1,1,2,2-Tetrachlorethane	---	(*)

(*) These parameters are required by the TMDL. The daily maximum loading shall be reported as the sum of Internal Outfall 10B (Phase II) and Internal Outfall 20A (Phase II). The sum shall not exceed the loading for the corresponding parameters at Final Outfall B01 (Phases II and III).

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Site-Specific Consideration(s)

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - These requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

***Internal Outfall 30A** - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment).

The following schedule starts on the effective date of the permit and expires upon the startup of Outfall 301 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River, or expiration of the permit.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	---	Report
Total Mercury	---	Report
PCB-1254	---	Report
Hexachlorobutadiene	---	Report
Hexachlorobenzene	---	Report
Bromoform	---	Report
1,1,2,2-Tetrachlorethane	---	Report

Site-Specific Consideration(s)

Total Copper, Total Mercury, PCB-1254, 1,1,2,2-Tetrachloroethane, Hexachlorobenzene, Hexachlorobutadiene, and Bromoform - This outfall receives post first flush stormwater from Internal Outfall 20A or 201, therefore report and monitor only requirements have been established to ensure compliance with the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

***Outfall 001, Mercury Cell Closure In Transition, (When Outfall 001 is Discharging to the Main Stem of the Calcasieu River)** - the continuous discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush

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stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; sulfuric acid stripper water; evaporator area pump seal water; HCL area pump seal water; and discharges from Internal Outfalls 101, 201, and 301.

Outfall 001, Phase I - (Pre TMDL and Other Water Quality (Non-TMDL) Requirements)

The following requirements are effective upon the startup of Outfall 001 after the relocation from Bayou D'Inde to the Main Stem of the Calcasieu River prior to June 12, 2008 and are valid until the June 12, 2008 move into Outfall 001 Phase II.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Nickel	Report	Report
Total Copper	---	Report (*)
Total Mercury	---	Report (*)
Hexachlorobutadiene	0.891904	2.117422
Hexachlorobenzene	0.005344	0.12720
Benzo(a)anthracene	---	Report (*)
Benzo(a)pyrene	---	Report(*)

(*) These are TMDL parameters. The reported value for these parameters shall be the arithmetic sum of the corresponding parameters at Internal Outfall 101 (Phase I) and 201 (Phase I).

Site-Specific Consideration(s)

Total Nickel - Non-TMDL Water Quality Based Effluent Limitations. In accordance with LAC 33:IX.1109.D.1, reporting requirements have been established during Phase I to give PPG Industries time to come into compliance with Water Quality Standards.

Hexachlorobutadiene and Hexachlorobenzene - Non-TMDL Water Quality Based Effluent Limitations. Water Quality based effluent limitations were established in the current modified NPDES permit, effective in July 1, 1991. Therefore, no additional time will be given for PPG Industries to come into compliance with water quality standards.

Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene - These parameters have been established in accordance with the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002. Report and monitor only requirements are applied until June 12, 2008.

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Outfall 001, Phase II - (Post TMDL and Pre Other Water Quality (Non-TMDL) Requirements)

The following requirements are effective upon startup of Outfall 001 Phase II, after the relocation from Bayou D'Inde to the Main Stem of the Calcasieu River beginning on June 13, 2008 and are valid until the startup of Outfall 001 Phase III, three years from the effective date of the permit.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Nickel	Report	Report
Total Copper	---	7.09000 (*)
Total Mercury	---	0.04894 (*)
Hexachlorobutadiene	0.891904	2.117422
Hexachlorobenzene	0.005344	0.012720
Benzo(a)anthracene	---	0.2375 (*)
Benzo(a)pyrene	---	0.2375 (*)

(*) These are TMDL parameters. The reported value for these parameters shall be the arithmetic sum of the corresponding parameters at Internal Outfall 101 (Phase II) and 201 (Phase II).

Site-Specific Consideration(s)

Total Nickel - Non-TMDL Water Quality Based Effluent Limitations. In accordance with LAC 33:IX.1109.D.1, reporting requirements have been established during Phase II to give PPG Industries time to come into compliance with Water Quality Standards.

Hexachlorobutadiene and Hexachlorobenzene - Non-TMDL Water Quality Based Effluent Limitations. Water Quality based effluent limitations were established in the current modified NPDES permit, effective in July 1, 1991. Therefore, no additional time will be given for PPG Industries to come into compliance with water quality standards.

Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene - The Upper Calcasieu Estuary TMDL at Subsegment 030301 did not include Waste Load Allocations (WLAs) for PPG Industries since the discharges have historically gone into Bayou D'Inde at Subsegment 030901. Subsegment 030301 is impaired for Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene and has an existing TMDL to address these pollutants. Since PPG was not assigned allocations as part of the existing TMDL, limits for these parameters may be established for new or upgraded discharges using a portion of the Margin Of Safety (MOS) in Subsegment 030301. Therefore, the methodology for establishing limitations to address the impairments under Subsegment 030301 is discussed below.

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While PPG Industries opposes incorporation of the TMDL into the renewal of this LPDES permit, they are aware that the LDEQ is required to ensure consistency with the Water Quality Management Plan requirements approved by EPA under Section 208(b) of the Clean Water Act (CWA), as cited in LAC 33:IX.2707.D.6. Therefore, PPG has requested consideration of allocations using the MOS for Total Copper (10.05 lbs/day) and Total Mercury (0.0808 lbs/day plus any unused portion of the WLA), as described in a letter to this Office dated March 2, 2007. The requested allocations would be 86% of the MOS for Total Copper and 100% of the MOS for Total Mercury.

After review of the March 2, 2007 request for specific allocations, the LDEQ proposes to use a fifty percent (50%) portion of the Calcasieu Toxics TMDL MOS for all parameters listed in Subsegment 030301 plus the applicable WLAs assigned in the Bayou D'Inde TMDL under Subsegment 030901. The LDEQ's decision to use 50% of the subsegment 030301 MOS in addition to the Bayou D'Inde, subsegment 030901 WLA is based on the following:

1. The LDEQ has determined that fifty percent of the MOS should be held in reserve for future growth in the area such as new facilities and/or facility expansions.
2. Use of the WLAs for Total Copper and Total Mercury from the Bayou D'Inde TMDL is appropriate based on the following items:
 - A. PPG has historically been the last facility contributing wastewaters to Bayou D'Inde prior to mixing with the waters of the Main Stem of the Calcasieu River, about 1,200 feet downstream.
 - B. The WLAs used in the Bayou D'Inde TMDL were included in the overall model of the Upper Calcasieu Estuary TMDL for Subsegment 030301.

Based on both factors listed above, the LDEQ has determined the proximity of the new outfall location is similar to the existing conditions and subsequently the overall loadings of Total Copper and Total Mercury in the Main Stem of the Calcasieu River are not reasonably expected to change.

CALCULATIONS

$$\text{Parameter Allocation} = \frac{\text{MOS lbs/day} + \text{WLA from Bayou D'Inde}}{2}$$

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PARAMETER	CALCASIEU MAIN STEM (030301) MARGIN OF SAFETY IN POUNDS PER DAY (PPD)	CALCASIEU MAIN STEM (030301) ALLOCATION IN POUNDS PER DAY (PPD)	BAYOU D'INDE (030901) WLA FROM THE TMDL IN POUNDS PER DAY (PPD)	CALCASIEU RIVER ALLOCATION PLUS BAYOU D'INDE WLA IN POUNDS PER DAY (PPD) (*1)
Total Copper	11.7	5.85	1.240000	7.09000
Total Mercury	0.0808	0.0404	0.008540	0.04894
Benzo(a) anthracene	0.475	0.2375	N/A	0.23750
Benzo(a) pyrene	0.475	0.2375	N/A	0.23750

(*1) The flow weighted combined loadings of Internal Outfalls 101 and 201.

SITE-SPECIFIC MQLS

Final Outfall and associated internal outfalls -To protect against the potential for discharges of the Calcasieu Toxics TMDL pollutants, benzo(a)anthracene and benzo(a)pyrene at levels above that of state water quality standards, and for discharges of benzo(a)anthracene and benzo(a)pyrene at levels exceeding state water quality standards, site specific MQL's were developed for these parameters. (See Part II.K).

$MQL (mg/L) = \frac{TMDL \text{ assigned Loading for Chemical X}}{\text{Flow used in Bayou D'Inde} \times 8.34 \text{ conversion factor}}$

$MQL (\mu g/L) = MQL (mg/L) \times 1000$

PARAMETERS	COMBINED LOADING FOR INTERNAL OUTFALLS 101 and 201 (LBS/DAY)	FLOW USED IN THE BAYOU D'INDE TMDL (MGD)	CONVERSION FACTOR	MQL DETECTION LIMIT $\mu g/L$
Benzo(a)anthracene	0.2375	16.297	8.34	1.7474
Benzo(a)pyrene	0.2375	16.297	8.34	1.7474

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Outfall 001, Phase III - (Post TMDL and Other Water Quality (Non-TMDL) Requirements)

The following requirements are effective after the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River, three years from the effective date of the permit and are valid through the permit expiration date.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Nickel	22.90243	54.37142
Total Copper	---	7.09000 (*)
Total Mercury	---	0.04894 (*)
Hexachlorobutadiene	0.891904	2.117422
Hexachlorobenzene	0.005344	0.012720
Benzo(a)anthracene	---	0.23750 (*)
Benzo(a)pyrene	---	0.23750 (*)

(*) These are TMDL parameters. The reported value for these parameters shall be the arithmetic sum of the corresponding parameters at Internal Outfall 101 (Phase II) and 201 (Phase II).

Site-Specific Consideration(s)

Total Nickel, Hexachlorobenzene, and Hexachlorobutadiene - Non-TMDL Water Quality Based Effluent Limitations.

Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene - The Upper Calcasieu Estuary TMDL at Subsegment 030301 did not include Waste Load Allocations (WLAs) for PPG Industries since the discharges have historically gone into Bayou D'Inde at Subsegment 030901. Subsegment 030301 is impaired for Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene and has an existing TMDL to address these pollutants. Since PPG was not assigned allocations as part of the existing TMDL, limits for these parameters may be established for new or upgraded discharges using a portion of the Margin Of Safety (MOS) in Subsegment 030301. Therefore, the methodology for establishing limitations to address the impairments under Subsegment 030301 is discussed below.

While PPG Industries opposes incorporation of the TMDL into the renewal of this LPDES permit, they are aware that the LDEQ is required to ensure consistency with the Water Quality Management Plan requirements approved by EPA under Section 208(b) of the Clean Water Act (CWA), as cited in LAC 33:IX.2707.D.6. Therefore, PPG has requested consideration of allocations using the MOS for Total Copper (10.05 lbs/day) and Total Mercury (0.0808 lbs/day plus any unused portion of the WLA), as described in a letter to this Office dated March 2, 2007. The requested allocations would be 86% of the MOS for Total Copper and 100% of the MOS for Total Mercury.

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After review of the March 2, 2007 request for specific allocations, the LDEQ proposes to use a fifty percent (50%) portion of the Calcasieu Toxics TMDL MOS for all parameters listed in Subsegment 030301 plus the applicable WLAs assigned in the Bayou D'Inde TMDL under Subsegment 030901. The LDEQ's decision to use 50% of the subsegment 030301 MOS in addition to the Bayou D'Inde, subsegment 030901 WLA is based on the following:

1. The LDEQ has determined that fifty percent of the MOS should be held in reserve for future growth in the area such as new facilities and/or facility expansions.
2. Use of the WLAs for Total Copper and Total Mercury from the Bayou D'Inde TMDL is appropriate based on the following items:
 - A. PPG has historically been the last facility contributing wastewaters to Bayou D'Inde prior to mixing with the waters of the Main Stem of the Calcasieu River, about 1,200 feet downstream.
 - B. The WLAs used in the Bayou D'Inde TMDL were included in the overall model of the Upper Calcasieu Estuary TMDL for Subsegment 030301.

Based on both factors listed above, the LDEQ has determined the proximity of the new outfall location is similar to the existing conditions and subsequently the overall loadings of Total Copper and Total Mercury in the Main Stem of the Calcasieu River are not reasonably expected to change.

CALCULATIONS

$$\text{Parameter Allocation} = \frac{\text{MOS lbs/day}}{2} + \text{WLA from Bayou D'Inde}$$

PARAMETER	CALCASIEU MAIN STEM (030301) MARGIN OF SAFETY IN POUNDS PER DAY (PPD)	CALCASIEU MAIN STEM (030301) ALLOCATION IN POUNDS PER DAY (PPD)	BAYOU D'INDE (030901) WLA FROM THE TMDL IN POUNDS PER DAY (PPD)	CALCASIEU RIVER ALLOCATION PLUS BAYOU D'INDE WLA IN POUNDS PER DAY (PPD) (*1)
Total Copper	11.7	5.85	1.240000	7.09000
Total Mercury	0.0808	0.0404	0.008540	0.04894
Benzo(a) anthracene	0.475	0.2375	N/A	0.23750
Benzo(a) pyrene	0.475	0.2375	N/A	0.23750

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(*1) The flow weighted combined loadings of Internal Outfalls 101 and 201.

SITE-SPECIFIC MQLS

Final Outfall and associated internal outfalls -To protect against the potential for discharges of the Calcasieu Toxics TMDL pollutants, benzo(a)anthracene and benzo(a)pyrene at levels above that of state water quality standards, and for discharges of benzo(a)anthracene and benzo(a)pyrene at levels exceeding state water quality standards, site specific MQL's were developed for these parameters. (See Part II.K).

MQL (mg/L) = TMDL assigned Loading for Chemical X
Flow used in Bayou D'Inde x 8.34 conversion factor

MQL ($\mu\text{g/L}$) = MQL (mg/L) x 1000

PARAMETERS	COMBINED LOADING FOR INTERNAL OUTFALLS 101 and 201 (LBS/DAY)	FLOW USED IN THE BAYOU D'INDE TMDL (MGD)	CONVERSION FACTOR	MQL DETECTION LIMIT $\mu\text{g/L}$
Benzo(a)anthracene	0.2375	16.297	8.34	1.7474
Benzo(a)pyrene	0.2375	16.297	8.34	1.7474

INTERNAL OUTFALLS TO OUTFALL 001 INCLUDE 101, 201, AND 301

***Internal Outfall 101** - the continuous discharge of wastewater from the decommissioning of the Mercury Cell and associated activities; process wastewater from Membrane Cell portion of Plant A including HCL tank vent scrubber effluent, acid and soda ash storage areas process wastewater, and wastewater from the sulfuric acid stripper, membrane cell room floor drains, and pump seal water from evaporator or HCL area; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; process wastewater from brine solid treatment portion of Plant A; once through non-contact cooling water from Diaphragm Cells; and low contamination potential stormwater runoff.

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Outfall 101 Phase I - (Pre TMDL)

The following requirements are effective upon the startup of Outfall 101 for the Mercury Cell Closure Transition after the Outfall 001 relocation from Bayou D'Inde to the Main Stem of the Calcasieu River complete, prior to June 12, 2008 and are valid until the June 12, 2008 move into Outfall 101 Phase II.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	19.05	46.66
Total Mercury	0.14	0.33
Benzo(a)anthracene	---	Report
Benzo(a)pyrene	---	Report

Site-Specific Consideration(s)

Total Copper and Total Mercury - limitations were established in accordance with the requirements of the Inorganic Guidelines at 40 CFR Part 415. These parameters were included under water quality requirements because they were also identified in the Upper Calcasieu Estuary TMDL for Bayou D'Inde issued in the Federal Register on June 13, 2002.

Benzo(a)anthracene and Benzo(a)pyrene - These reporting requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002.

Outfall 101 Phase II - (Post TMDL)

The following requirements are effective upon the startup of Outfall 101 Phase II for the Mercury Cell Closure Transition after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River, beginning on June 13, 2008, and are valid until permit expiration.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	---	(*)
Total Mercury	---	(*)
Benzo(a)anthracene	---	(*)
Benzo(a)pyrene	---	(*)

(*) These parameters are required by the TMDL. The daily maximum loading shall be reported as the sum of Internal Outfall 101 (Phase II) and Internal Outfall 201 (Phase II). The sum shall not exceed the loading for the corresponding parameters at Final Outfall 001 (Phases II and III).

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Site-Specific Consideration(s)

Total Copper, Total Mercury, Benzo(a)anthracene and Benzo(a)pyrene - These requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002.

***Internal Outfall 201** - the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.

Outfall 201 Phase I - (Pre TMDL)

The following requirements are effective upon the startup of the Outfall 201 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River, prior to June 12, 2008 and are valid until the June 12, 2008 move into Outfall 201 Phase II.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	34.21	81.86
Total Mercury	---	Report
Benzo(a)anthracene	0.29	0.73
Benzo(a)pyrene	0.31	0.74

Site-Specific Consideration(s)

Total Copper, Benzo(a)anthracene, and Benzo(a)pyrene - limitations were established in accordance with the requirements of the OCPSF and Inorganic Guidelines at 40 CFR Parts 414 and 415, respectively. These parameters were included under water quality requirements because they were also identified in the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002.

Total Mercury - This reporting requirement has been established in accordance with the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002.

Outfall 201 Phase II - (Post TMDL)

The following requirements are effective upon the startup of Outfall 201

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Phase II, after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River, beginning on June 13, 2008 and I are valid until permit expiration.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	---	(*)
Total Mercury	---	(*)
Benzo(a)anthracene	---	(*)
Benzo(a)pyrene	---	(*)

(*) These parameters are required by the TMDL. The daily maximum loading shall be reported as the sum of Internal Outfall 101 (Phase II) and Internal Outfall 201 (Phase II). The sum shall not exceed the loading for the corresponding parameters at Final Outfall 001 (Phases II and III).

Site-Specific Consideration(s)

Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene
- These requirements have been established in accordance with the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002.

***Internal Outfall 301** - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment).

The following schedule starts upon the startup of Outfall 301 after the relocation of Outfall 001 from Bayou D'Inde to the Main Stem of the Calcasieu River and are valid through permit expiration.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/DAY)</u>	<u>DAILY MAXIMUM (LBS/DAY)</u>
Total Copper	---	Report
Total Mercury	---	Report
Benzo(a)anthracene	---	Report
Benzo(a)pyrene	---	Report

Site-Specific Consideration(s)

Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene
- This outfall receives post first flush stormwater from Internal Outfall 201, therefore report and monitor only requirements have been established to ensure compliance with the Upper Calcasieu Estuary

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TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002.

2. Outfalls 002 and 004 - Stormwater and Utility Wastewaters

***Outfall 002** - the discharge of stormwater runoff from Plant A; steam condensate from Diaphragm Cell Chlor/Alkali production (Plant A); once through non-contact cooling water from Plant A; treated bilge water from barge transport vehicle; potential groundwater intrusion; and intermittent discharges of firewater and from condensate piping.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(μg/L)</u>	<u>DAILY MAXIMUM</u> <u>(μg/L)</u>
Total Copper	---	Report
Total Mercury	---	Report
Benzo(a)anthracene	---	Report
Benzo(a)pyrene	---	Report

Site-Specific Consideration(s)

Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene - These report and monitor only requirements have been established to ensure compliance with the Upper Calcasieu Estuary TMDL for the Main Stem of the Calcasieu River issued in the Federal Register on June 13, 2002.

***Outfall 004** - the discharge of once though non-contact cooling water from Plant A chlorine/caustic facility; wash down from car including car wash; cooling tower blowdown; intermittent discharges from condensate piping and acid tank scrubber discharge; and storm water runoff from caustic storage, chlorine liquefaction, and brine treatment areas.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE</u> <u>(LBS/Day)</u>	<u>DAILY MAXIMUM</u> <u>(LBS/day)</u>
Total Copper	---	Report
Total Mercury	---	Report
Total Nickel	---	Report
Total Zinc	---	Report
Total Calcium	---	Report
1,2-Dichloroethane	---	Report
Phenol	---	Report
2-Methylnapthalene	---	Report

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<u>PARAMETER</u>	<u>MONTHLY AVERAGE (LBS/Day)</u>	<u>DAILY MAXIMUM (LBS/day)</u>
Anthracene	---	Report
Benzo(a)anthracene	---	Report
Benzo(a)pyrene	---	Report
Chrysene	---	Report
Dibenzo(a,h)anthracene	---	Report
Fluoranthene	---	Report
Pyrene	---	Report
Phenanthrene	---	Report

Site-Specific Consideration(s)

Total Copper, Total Mercury, Total Nickel, Total Zinc, Total Calcium, 1,2-Dichloroethane, Phenol, 2-Methylnaphthalene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Pyrene, and Phenanthrene - These report and monitor only requirements have been established to ensure compliance with the Upper Calcasieu Estuary TMDL for Bayou Verdine issued in the Federal Register on June 13, 2002.

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. They are also listed in Part II.J and K of the permit.

TMDL Waterbodies

Outfalls A01 and B01

The discharges from outfalls A01 and B01 include process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; and discharges from Internal Outfalls 10A, 10B, 20A, and 30A are to local drainage, thence to Bayou D'Inde, Segment No. 030901. Subsegment 030901 was not listed on the Final Integrated list of impairments due to the Upper Calcasieu Estuary Toxics TMDL being issued June 13, 2002. This TMDL addressed Copper, Mercury, PCB-1254, Hexachlorobenzene, Hexachlorobutadiene,

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Bromoform, 1,1,2,2-Tetrachloroethane and Dissolved Oxygen.

Copper, Mercury, PCB-1254, Hexachlorobenzene, Hexachlorobutadiene, Bromoform, and 1,1,2,2-Tetrachloroethane - The TMDL for Toxics for the Calcasieu Estuary was finalized on June 13, 2002, addressing the presence of toxic substances, including Copper, Mercury, PCB-1254, Hexachlorobenzene, Hexachlorobutadiene, Bromoform, and 1,1,2,2-Tetrachloroethane in the watershed. The applicant's facility received the following limits in this TMDL at Outfalls A10 and B10:

PARAMETER(S)	DAILY MAX LIMIT (LBS/DAY)
Total Copper	1.240000(*)
Total Mercury	0.008540(*)
PCB-1254	0.0000124(*)
Hexachlorobenzene	0.000310(*)
Hexachlorobutadiene	0.132000(*)
Bromoform	43.000000(*)
1,1,2,2-Tetrachloroethane	2.230000(*)

(*)These loadings shall be reported on the DMR as the flow weighted combined loading of the named pollutant at Internal Outfall 10A and 20A (for Final Outfall A01) or 10B and 20A (for Final Outfall B01).

Dissolved Oxygen -In addition to the Upper Calcasieu Toxics TMDL, a July 1, 2002 Calcasieu Estuary Dissolved Oxygen TMDL was developed that included Subsegment 030901 (Bayou D'Inde). This TMDL is applicable to discharges that occur during the interim period until the facility reroutes effluent to the Main Channel of the Calcasieu River (Subsegment 030301). The D.O. TMDL accounted for the contribution from this permitted facility as a process flow rate of 241.84 MGD was incorporated in the modeling efforts. Based upon modeling conducted as part of the evaluation of Bayou D'Inde, it was determined that existing criterion for Bayou D'Inde (Subsegment 030901) would be attained with no reductions in non-point or point sources. As a result, no specific waste load allocation was identified for this point source, nor were any load reductions of oxygen consuming pollutants required.

The typical permitting approach employed for facilities discharging to segments where established TMDLs have resulted in no required reductions includes having the facility maintain discharge limits at existing permitted loads. Effluent limitation guidelines were not applied at the time the current 1991 NPDES permit was issued to PPG Industries, and thus, the current permit does not establish numeric limits for oxygen-limiting parameters to use as a baseline. However, this preliminary draft permit does incorporate applicable technology-based requirements to establish BOD5 limitations. Considering that the current process flow rate of 221.1 MGD used for the evaluation of water quality is less than the modeled TMDL flow rate, and considering that the preliminary draft permit includes the first time application of effluent guidelines, the BOD5 limitation established by this preliminary draft permit is appropriate and consistent with the D.O. TMDL for Bayou D'Inde.

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Outfalls 001 and 002

The discharges from outfall 001 includes process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; and discharges from Internal Outfalls 101, 201, and 301 are to local drainage, thence to the Main Stem of the Calcasieu River, Segment No. 030301. The discharges from outfall 002 includes stormwater runoff from Plant A; steam condensate from Diaphragm Cell Chlor/Alkali production (Plant A); once through non-contact cooling water from Plant A; treated bilge water from barge transport vehicle; potential groundwater intrusion; and intermittent discharges of firewater and from condensate piping are to local drainage, thence to the Calcasieu Ship Channel, Segment No. 030301. Subsegment 030301 was not listed on the Final Integrated list of impairments due to the Upper Calcasieu Estuary Toxics TMDL being issued June 13, 2002. This TMDL addressed Copper, Mercury, Benzo(a)anthracene, and Benzo(a)pyrene.

Copper, Mercury, Benzo(a)anthracene, and Benzo(a)pyrene - The for Toxics for the Calcasieu Estuary was finalized on June 13, 2002, addressing the presence of toxic substances, including Copper, Mercury, Benzo(a)anthracene, and Benzo(a)pyrene in the watershed. The applicant's facility received the following limits in this at Outfall 001:

<u>PARAMETER(S)</u>	<u>DAILY MAX LIMIT (LBS/DAY) (*)</u>
Copper	7.09000
Mercury	0.04894
Benzo(a)Anthracene	0.23750
Benzo(a)Pyrene	0.23750

(*)These loadings shall be reported on the DMR as the flow weighted combined loading of the named pollutant at Internal Outfall 101 and 201.

MARGIN OF SAFETY USE

The LDEQ proposes to use a fifty percent (50%) portion of the Calcasieu Toxics TMDL MOS for all parameters listed in Subsegment 030301 plus the applicable WLAs assigned in the Bayou D'Inde TMDL under Subsegment 030901. The LDEQ's decision to use 50% of the subsegment 030301 MOS in addition to the Bayou D'Inde, subsegment 030901 WLA is based on the following:

1. The LDEQ has determined that fifty percent of the MOS should be held in reserve for future growth in the area such as new facilities and/or facility expansions.
2. Use of the WLAs for Total Copper and Total Mercury from the Bayou

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D'Inde TMDL is appropriate based on the following items:

- A. PPG has historically been the last facility contributing wastewaters to Bayou D'Inde prior to mixing with the waters of the Main Stem of the Calcasieu River, about 1,200 feet downstream.
- B. The WLAs used in the Bayou D'Inde TMDL were included in the overall model of the Upper Calcasieu Estuary TMDL for Subsegment 030301.

Based on both factors listed above, the LDEQ has determined the proximity of the new outfall location is similar to the existing conditions and subsequently the overall loadings of Total Copper and Total Mercury in the Main Stem of the Calcasieu River are not reasonably expected to change.

CALCULATIONS

$$\text{Parameter Allocation} = \frac{\text{MOS lbs/day}}{2} + \text{WLA from Bayou D'Inde}$$

PARAMETER	CALCASIEU MAIN STEM (030301) MARGIN OF SAFETY IN POUNDS PER DAY (PPD)	CALCASIEU MAIN STEM (030301) ALLOCATION IN POUNDS PER DAY (PPD)	BAYOU D'INDE (030901) WLA FROM THE TMDL IN POUNDS PER DAY (PPD)	CALCASIEU RIVER ALLOCATION PLUS BAYOU D'INDE WLA IN POUNDS PER DAY (PPD) (*1)
Total Copper	11.7	5.85	1.240000	7.09000
Total Mercury	0.0808	0.0404	0.008540	0.04894
Benzo(a) anthracene	0.475	0.2375	N/A	0.23750
Benzo(a) pyrene	0.475	0.2375	N/A	0.23750

(*1) The flow weighted combined loadings of Internal Outfalls 101 and 201.

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Copper, Mercury, Benzo(a)anthracene, and Benzo(a)pyrene - The TMDL for Toxics for the Calcasieu Estuary was finalized on June 13, 2002, addressing the presence of toxic substances, including Copper, Mercury, Benzo(a)anthracene, and Benzo(a)pyrene in the watershed. The applicant's facility received the following limits in this TMDL at Outfall 002:

PARAMETER(S)	DAILY MAX LIMIT ($\mu\text{g/L}$)
Copper	Report
Mercury	Report
Benzo(a)Anthracene	Report
Benzo(a)Pyrene	Report

Outfall 004

The discharges from outfall 004 includes the discharge of once through non-contact cooling water from Plant A chlorine/caustic facility; wash down from car including car wash; cooling tower blowdown; intermittent discharges from condensate piping and acid tank scrubber discharge; and storm water runoff from caustic storage, chlorine liquefaction, and brine treatment areas are to local drainage, thence to Bayou Verdine, Segment No. 030306. Subsegment 030306 was not listed on the Final Integrated list of impairments due to the Upper Calcasieu Estuary Toxics TMDL being issued June 13, 2002. This TMDL addressed Total Copper, Total Mercury, Total Nickel, Total Zinc, Total Calcium, 1,2-Dichloroethane, Phenol, 2-Methylnaphthalene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Pyrene, and Phenanthrene.

Total Copper, Total Mercury, Total Nickel, Total Zinc, Total Calcium, 1,2-Dichloroethane, Phenol, 2-Methylnaphthalene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Pyrene, and Phenanthrene - The TMDL for Toxics for the Calcasieu Estuary was finalized on June 13, 2002, addressing the presence of toxic substances, including Total Copper, Total Mercury, Total Nickel, Total Zinc, Total Calcium, 1,2-Dichloroethane, Phenol, 2-Methylnaphthalene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Pyrene, and Phenanthrene in the watershed. The applicant's facility received the following limits in this TMDL at Outfall 004:

PARAMETER	DAILY MAXIMUM (LBS/day)
Total Copper	Report
Total Mercury	Report
Total Nickel	Report
Total Zinc	Report
Total Calcium	Report
1,2-Dichloroethane	Report
Phenol	Report

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<u>PARAMETER</u>	<u>DAILY MAXIMUM (LBS/day)</u>
2-Methylnaphthalene	Report
Anthracene	Report
Benzo(a)anthracene	Report
Benzo(a)pyrene	Report
Chrysene	Report
Dibenzo(a,h)anthracene	Report
Fluoranthene	Report
Pyrene	Report
Phenanthrene	Report

A reopener clause will be established in the permit to include more stringent limits based on final loading allocations in the completed and approved TMDL.

D. Biomonitoring Requirements

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for individual Outfall(s) 001 and 004 are as follows:

TOXICITY TESTS

Chronic static renewal 7-day
survival and growth test
using Mysidopsis bahia
[Method 1007.0]

FREQUENCY

1/quarter

Chronic static renewal 7-day
larval survival and growth test
using inland silverside minnow
(Menidia beryllina) [Method 1006.0]

1/quarter

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water

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quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and salinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to the Office of Environmental Compliance. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

Outfall A01

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 24%, 33%, 44%, 58%, and 77%. The low-flow effluent concentration (critical dilution) is defined as 77% effluent.

Outfall B01

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 24%, 33%, 44%, 58%, and 77%. The low-flow effluent concentration (critical dilution) is defined as 77% effluent.

Outfall 001

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 19%, 26%, 34%, 46%, and 61%. The low-flow effluent concentration (critical dilution) is defined as 46% effluent.

Outfall 004

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 29%, 39%, 52%, 70%, and 93%. The low-flow effluent concentration (critical dilution) is defined as 93% effluent.

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E. MONITORING FREQUENCIES

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [LAC 33:IX.2715/40 CFR 122.48(b)] and to assure compliance with permit limitations [LAC 33:IX.2707.1./40 CFR 122.44(I)]. The following section(s) explain the rationale for the monitoring frequencies stated in the draft permit.

1. Outfalls A01, B01, 001, 10A, 10B, 101, 20A, 201, 30A, and 301 - Process Wastewaters

***Outfall A01 (ALL PHASES), While the Mercury Cell is in Operation (Bayou D'Inde Location)** - the discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; and discharges from Internal Outfalls 10A, 20A, and 30A.

Flow, Temperature (°F), and pH shall be monitored continuously. These monitoring frequencies were retained from the current modified permit, effective on July 1, 1991.

PARAMETER(S)	MONITORING FREQUENCY
Flow	Continuous
Temperature (°F)	Continuous
pH	Continuous

BOD₅ shall be monitored 3/week. This monitoring frequency has been established based on Best Professional Judgment and is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

PARAMETER(S)	MONITORING FREQUENCY
BOD ₅	3/week

The frequencies for Hexachlorobenzene, Hexachlorobutadiene, and Bromoform were reduced from 3/week to 1/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

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PARAMETER(S)	MONITORING FREQUENCY
Hexachlorobenzene	1/week
Hexachlorobutadiene	1/week
Bromoform	1/week

Total Copper, Total Mercury, PCB-1254, and 1,1,2,2-Tetrachlorethane shall be monitored 1/quarter. These monitoring frequencies were established in accordance with the Upper Calcasieu Estuary TMDL issued in the Federal Register on June 13, 2002.

Total Nickel and 1,1-Dichloroethylene shall also be monitored 1/quarter. These monitoring frequencies were established based on Best Professional Judgment due to these the parameters being non-TMDL water quality based effluent limitations.

PARAMETER(S)	MONITORING FREQUENCY
Total Copper	1/quarter
Total Mercury	1/quarter
PCB-1254	1/quarter
1,1,2,2-Tetrachlorethane	1/quarter
Total Nickel	1/quarter
1,1-Dichloroethylene	1/quarter

PPG Industries has requested to add monitor and report requirements for Risk Evaluation and Corrective Action Program (RECAP) parameters at a frequency of 1/year. LAC 33:I. Chapter 13 defines "surface waters" as excluding certain on-site ditches. The definition in RECAP states; "Ditches that are part of a treatment system shall not be considered surface water provided that the treatment system is monitored downstream of an impacted area for the [constituents of concern] under the terms of an LPDES permit. Under the RECAP Program, the LDEQ Environmental Remediation Group has identified several constituents of concern. Therefore, to ensure that the PPG Canal meets the above exclusion, and to demonstrate that such potential constituents are monitored, this request was has been granted and the frequencies have been established at 1/year.

PARAMETER	MONITORING FREQUENCY
1,1,1,2-Tetrachloroethane	1/year
1,1,2-Trichloroethane	1/year
1,1-Dichloroethene	1/year
1,2-Dichloroethane	1/year

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PARAMETER	MONITORING FREQUENCY
1,2-Dichloroethene	1/year
1,2-Dichloropropane	1/year
Benzene	1/year
Bis(2-chloroethyl)Ether	1/year
Bis(2-ethylhexyl)phthalate	1/year
Carbon Tetrachloride	1/year
Chlorobenzene	1/year
Chloroform	1/year
Cis-1,2- Dichloroethene	1/year
Dichloromethane	1/year
Hexachloroethane	1/year
Naphthalene	1/year
Pentachlorophenol	1/year
Phenol	1/year
Tetrachloroethene	1/year
Thallium	1/year
Trichloroethene	1/year
Vinyl Chloride	1/year

INTERNAL OUTFALLS TO OUTFALL A01 INCLUDE 10A, 20A, AND 30A

***Internal Outfall 10A (ALL PHASES)** - the discharge of trace contamination process wastewater, treated process wastewater and stormwater from Mercury Cell Chlor/Alkali production facilities including cell room water, seal water, brine treatment solids, and brine purges; process wastewater from the mercury cell process trace including chlorinated condensate, spent sulfuric acid, chlorine seal water, and spent neutralizer caustic and hypochlorite; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows,

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start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; brine solid treatment portion of Plant A; once through non-contact cooling water; and low contamination potential stormwater runoff.

Flow shall be monitored continuously. This monitoring frequency was retained from the current modified permit, effective on July 1, 1991.

PARAMETER(S)	MONITORING FREQUENCY
Flow	Continuous

The frequency for TSS was reduced from 3/week to 2/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

PARAMETER(S)	MONITORING FREQUENCY
TSS	2/week

The frequencies for Total Residual Chlorine, Total Nickel, Total Copper, and Total Mercury was reduced from 3/week to 1/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

Hexachlorobutadiene, Hexachlorobenzene, and Bromoform are water quality limited parameters that require PPG Industries to sample the Internal Outfalls 10A and 20A and sum the results to reach a final limitation reported at Outfall A01. Therefore, the frequencies for Hexachlorobutadiene, Hexachlorobenzene, and Bromoform will be monitored at 1/week to be consistent with the frequencies established at Final Outfall A01.

Total Lead - The frequency for Total Lead will be established at 1/week. This frequency is based on Best Professional Judgment.

PARAMETER(S)	MONITORING FREQUENCY
Total Residual Chlorine	1/week
Total Nickel	1/week
Total Copper	1/week
Total Mercury	1/week
Hexachlorobutadiene	1/week
Hexachlorobenzene	1/week

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PARAMETER	MONITORING FREQUENCY
Bromoform	1/week
Total Lead	1/week

PCB-1254 and 1,1,2,2-Tetrachlorethane shall be monitored 1/quarter. These monitoring frequencies were established in accordance with the Upper Calcasieu Estuary TMDL issued in the Federal Register on June 13, 2002.

PARAMETER(S)	MONITORING FREQUENCY
PCB-1254	1/quarter
1,1,2,2-Tetrachlorethane	1/quarter

***Internal Outfall 20A (ALL PHASES)** - the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.

Flow shall be monitored continuously. This monitoring frequency was retained from the current modified permit, effective on July 1, 1991.

PARAMETER(S)	MONITORING FREQUENCY
Flow	Continuous

The frequency for TSS was reduced from 3/week to 2/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

PARAMETER(S)	MONITORING FREQUENCY
TSS	2/week

Total Residual Chlorine, Total Nickel, Total Copper, Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, and Phenol are

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expected to be on-site. The frequencies were reduced from 3/week to 1/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

Hexachlorobutadiene, Hexachlorobenzene, and Bromoform are water quality limited parameters that require PPG Industries to sample the internal outfalls 10A and 20A and sum the results to reach a final limitation reported at Outfall A01. Therefore, the frequencies for Hexachlorobutadiene, Hexachlorobenzene, and Bromoform will be monitored at 1/week to be consistent with the frequencies established at Final Outfall A01.

Total Lead and Total Zinc - The frequencies for Total Lead and Total Zinc will be established at 1/week. This frequency is based on Best Professional Judgment.

Total Mercury - water quality limited parameters that require PPG Industries to sample the Internal Outfalls 10A and 20A and sum the results to reach a final limitation reported at Outfall A01. Therefore, the frequency for Total Mercury will be monitored at 1/week to be consistent with the frequency established at Final Outfall A01.

PARAMETER(S)	MONITORING FREQUENCY
Total Residual Chlorine	1/week
Total Nickel	1/week
Total Copper	1/week
Total Mercury	1/week
Carbon Tetrachloride	1/week
Chloroethane	1/week
Chloroform	1/week
1,1-Dichloroethane	1/week
1,2-Dichloroethane	1/week
1,1-Dichloroethylene	1/week
1,2-trans-Dichloroethylene	1/week
Methylene Chloride	1/week
Tetrachloroethylene	1/week
1,1,1-Trichloroethane	1/week
1,1,2-Trichloroethane	1/week

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PARAMETER	MONITORING FREQUENCY
Trichloroethylene	1/week
Vinyl Chloride	1/week
Phenol	1/week
Hexachlorobutadiene	1/week
Hexachlorobenzene	1/week
Bromoform	1/week
Total Lead	1/week
Total Zinc	1/week

PCB-1254 and 1,1,2,2-Tetrachloroethane - The frequencies for PCB-1254 and 1,1,2,2-Tetrachloroethane will be established at 1/quarter in accordance with the Bayou D'Inde requirements in the Upper Calcasieu Estuary, issued in the Federal Register on June 13, 2002.

PARAMETER(S)	MONITORING FREQUENCY
PCB-1254	1/quarter
1,1,2,2-Tetrachloroethane	1/quarter

Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2,4-Dimethylphenol, 4,6-Dinitro-o-Cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene are toxic pollutants required by guidelines, but not expected to be on-site. Therefore, a monitoring frequency of 1/year has been established based on Best Professional Judgment and is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

PARAMETER	MONITORING FREQUENCY
Acrylonitrile	1/year
Benzene	1/year
Chlorobenzene	1/year
1,2-Dichloropropane	1/year

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PARAMETER	MONITORING FREQUENCY
1,3-Dichloropropylene	1/year
Ethylbenzene	1/year
Methyl Chloride	1/year
Toluene	1/year
2,4-Dimethylphenol	1/year
4,6-Dinitro-o-Cresol	1/year
2,4-Dinitrophenol	1/year
2-Nitrophenol	1/year
4-Nitrophenol	1/year
Acenaphthene	1/year
Acenaphthylene	1/year
Anthracene	1/year
Benzo (a) anthracene	1/year
Benzo (a) pyrene	1/year
3,4-Benzofluoranthene	1/year
Benzo(k)fluoranthene	1/year
Bis(2-ethylhexyl)phthalate	1/year
Chrysene	1/year
1,2-Dichlorobenzene	1/year
1,3-Dichlorobenzene	1/year
1,4-Dichlorobenzene	1/year
Diethyl phthalate	1/year
Dimethyl phthalate	1/year
Di-n-butyl phthalate	1/year
Fluoranthene	1/year
Fluorene	1/year
Hexachloroethane	1/year
Naphthalene	1/year

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PARAMETER	MONITORING FREQUENCY
Nitrobenzene	1/year
Phenanthrene	1/year
Pyrene	1/year
1,2,4-Trichlorobenzene	1/year

***Internal Outfall 30A** - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment).

Flow shall be monitored 1/month. This monitoring frequency has been reduced from 3/weeks to 1/month based on the infrequent nature of this discharge (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment).

PARAMETER	MONITORING FREQUENCY
Flow	1/month

PPG Industries has requested a reduction in the measurement frequency for Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene. Since this outfall no longer has the same wastewaters as the current modified NPDES permit and is expected to discharge infrequently (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment), monitoring frequencies at 3/week is no longer appropriate. Therefore, based on revised outfall waste streams and good compliance history, the measurement frequencies for Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene have been changed from 3/week to 1/month.

PARAMETER(S)	MONITORING FREQUENCY
Carbon Tetrachloride	1/month
Chloroethane	1/month
Chloroform	1/month

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PARAMETER	MONITORING FREQUENCY
1,1-Dichloroethane	1/month
1,2-Dichloroethane	1/month
1,1-Dichloroethylene	1/month
1,2-trans-Dichloroethylene	1/month
Methylene Chloride	1/month
Tetrachloroethylene	1/month
1,1,1-Trichloroethane	1/month
1,1,2-Trichloroethane	1/month
Trichloroethylene	1/month
Vinyl Chloride	1/month
Phenol	1/month
Hexachlorobutadiene	1/month
Hexachlorobenzene	1/month

Total Copper, Total Mercury, PCB-1254, Bromoform, and 1,1,2,2,-Tetrachloroethane - The frequencies for Total Copper, Total Mercury, PCB-1254, Bromoform, and 1,1,2,2,-Tetrachloroethane will be established at 1/quarter in accordance with the Bayou D'Inde requirements in the Upper Calcasieu Estuary, issued in the Federal Register on June 13, 2002.

TOC and Oil & Grease - the frequency was established at 1/quarter based on current stormwater guidance and BPJ.

PARAMETER(S)	MONITORING FREQUENCY
Total Copper	1/quarter
Total Mercury	1/quarter
PCB-1254	1/quarter
Bromoform	1/quarter
1,1,2,2,-Tetrachloroethane	1/quarter
TOC	1/quarter
Oil & Grease	1/quarter

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Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2,4-Dimethylphenol, 4,6-Dinitro-o-Cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene are toxic pollutants required by guidelines, but not expected to be on-site. Therefore, a monitoring frequency of 1/year has been established based on Best Professional Judgment and is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

PARAMETER	MONITORING FREQUENCY
Acrylonitrile	1/year
Benzene	1/year
Chlorobenzene	1/year
1,2-Dichloropropane	1/year
1,3-Dichloropropylene	1/year
Ethylbenzene	1/year
Methyl Chloride	1/year
Toluene	1/year
2,4-Dimethylphenol	1/year
4,6-Dinitro-o-Cresol	1/year
2,4-Dinitrophenol	1/year
2-Nitrophenol	1/year
4-Nitrophenol	1/year
Acenaphthene	1/year
Acenaphthylene	1/year
Anthracene	1/year
Benzo (a) anthracene	1/year
Benzo (a) pyrene	1/year
3,4-Benzofluoranthene	1/year
Benzo(k)fluoranthene	1/year

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PARAMETER	MONITORING FREQUENCY
Bis(2-ethylhexyl)phthalate	1/year
Chrysene	1/year
1,2-Dichlorobenzene	1/year
1,3-Dichlorobenzene	1/year
1,4-Dichlorobenzene	1/year
Diethyl phthalate	1/year
Dimethyl phthalate	1/year
Di-n-butyl phthalate	1/year
Fluoranthene	1/year
Fluorene	1/year
Hexachloroethane	1/year
Naphthalene	1/year
Nitrobenzene	1/year
Phenanthrene	1/year
Pyrene	1/year
1,2,4-Trichlorobenzene	1/year

***Outfall B01 (ALL PHASES), Mercury Cell Closure Is In Transition (Bayou D'Inde Location)** - the discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; and discharges from Internal Outfalls 10B, 20A, and 30A.

Flow, Temperature (°F), and pH shall be monitored continuously. These monitoring frequencies were retained from the current modified permit, effective on July 1, 1991.

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<u>PARAMETER(S)</u>	<u>MONITORING FREQUENCY</u>
Flow	Continuous
Temperature (°F)	Continuous
pH	Continuous

BOD₅ shall be monitored 3/week. This monitoring frequency has been established based on Best Professional Judgment and is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

<u>PARAMETER(S)</u>	<u>MONITORING FREQUENCY</u>
BOD ₅	3/week

The frequencies for Hexachlorobenzene, Hexachlorobutadiene, and Bromoform were reduced from 3/week to 1/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

<u>PARAMETER(S)</u>	<u>MONITORING FREQUENCY</u>
Hexachlorobenzene	1/week
Hexachlorobutadiene	1/week
Bromoform	1/week

Total Copper, Total Mercury, PCB-1254, and 1,1,2,2-Tetrachlorethane shall be monitored 1/quarter. These monitoring frequencies were established in accordance with the Upper Calcasieu Estuary TMDL issued in the Federal Register on June 13, 2002.

Total Nickel and 1,1-Dichloroethylene shall also be monitored 1/quarter. These monitoring frequencies were established based on Best Professional Judgment due to these the parameters being non-TMDL water quality based effluent limitations.

<u>PARAMETER(S)</u>	<u>MONITORING FREQUENCY</u>
Total Copper	1/quarter
Total Mercury	1/quarter
PCB-1254	1/quarter
1,1,2,2-Tetrachlorethane	1/quarter
Total Nickel	1/quarter
1,1-Dichloroethylene	1/quarter

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PPG Industries has requested to add monitor and report requirements for Risk Evaluation and Corrective Action Program (RECAP) parameters at a frequency of 1/year. LAC 33:I. Chapter 13 defines "surface waters" as excluding certain on-site ditches. The definition in RECAP states; "Ditches that are part of a treatment system shall not be considered surface water provided that the treatment system is monitored downstream of an impacted area for the [constituents of concern] under the terms of an LPDES permit. Under the RECAP Program, the LDEQ Environmental Remediation Group has identified several constituents of concern. Therefore, to ensure that the PPG Canal meets the above exclusion, and to demonstrate that such potential constituents are monitored, this request was has been granted and the frequencies have been established at 1/year.

PARAMETER	MONITORING FREQUENCY
1,1,1,2-Tetrachloroethane	1/year
1,1,2-Trichloroethane	1/year
1,1-Dichloroethene	1/year
1,2-Dichloroethane	1/year
1,2-Dichloroethene	1/year
1,2-Dichloropropane	1/year
Benzene	1/year
Bis(2-chloroethyl)Ether	1/year
Bis(2-ethylhexyl)phthalate	1/year
Carbon Tetrachloride	1/year
Chlorobenzene	1/year
Chloroform	1/year
Cis-1,2- Dichloroethene	1/year
Dichloromethane	1/year
Hexachloroethane	1/year
Naphthalene	1/year
Pentachlorophenol	1/year
Phenol	1/year
Tetrachloroethene	1/year
Thallium	1/year
Trichloroethene	1/year

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<u>PARAMETER</u>	<u>MONITORING FREQUENCY</u>
Vinyl Chloride	1/year

INTERNAL OUTFALLS TO OUTFALL B01 INCLUDE 10B, 20A, AND 30A

***Internal Outfall 10B (ALL PHASES)** - the discharge of wastewater from the decommissioning of the Mercury Cell and associated activities; process wastewater from Membrane Cell portion of Plant A including HCL tank vent scrubber effluent, acid and soda ash storage areas process wastewater, and wastewater from the sulfuric acid stripper, membrane cell room floor drains, and pump seal water from evaporator or HCL area; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; process wastewater from brine solid treatment portion of Plant A; once through non-contact cooling water from Diaphragm Cells; and low contamination potential stormwater runoff.

Flow shall be monitored continuously. This monitoring frequency was retained from the current modified permit, effective on July 1, 1991.

<u>PARAMETER(S)</u>	<u>MONITORING FREQUENCY</u>
Flow	Continuous

The frequency for TSS was reduced from 3/week to 2/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

<u>PARAMETER(S)</u>	<u>MONITORING FREQUENCY</u>
TSS	2/week

The frequencies for Total Residual Chlorine, Total Nickel, Total Copper, and Total Mercury was reduced from 3/week to 1/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

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Hexachlorobutadiene, Hexachlorobenzene, and Bromoform are water quality limited parameters that require PPG Industries to sample the internal outfalls 10B and 20A and sum the results to reach a final limitation reported at Outfall B01. Therefore, the frequencies for Hexachlorobutadiene, Hexachlorobenzene, and Bromoform will be monitored at 1/week to be consistent with the frequencies established at Final Outfall B01.

Total Lead - The frequency for Total Lead will be established at 1/week. This frequency is based on Best Professional Judgment.

PARAMETER(S)	MONITORING FREQUENCY
Total Residual Chlorine	1/week
Total Nickel	1/week
Total Copper	1/week
Total Mercury	1/week
Hexachlorobutadiene	1/week
Hexachlorobenzene	1/week
Bromoform	1/week
Total Lead	1/week

PCB-1254 and 1,1,2,2-Tetrachlorethane shall be monitored 1/quarter. These monitoring frequencies were established in accordance with the Upper Calcasieu Estuary TMDL issued in the Federal Register on June 13, 2002.

PARAMETER(S)	MONITORING FREQUENCY
PCB-1254	1/quarter
1,1,2,2-Tetrachlorethane	1/quarter

***Internal Outfall 20A** - the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.

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Flow shall be monitored continuously. This monitoring frequency was retained from the current modified permit, effective on July 1, 1991.

PARAMETER(S)	MONITORING FREQUENCY
Flow	Continuous

The frequency for TSS was reduced from 3/week to 2/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

PARAMETER(S)	MONITORING FREQUENCY
TSS	2/week

Total Residual Chlorine, Total Nickel, Total Copper, Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, and Phenol are expected to be on-site. The frequencies were reduced from 3/week to 1/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

Hexachlorobutadiene, Hexachlorobenzene, and Bromoform are water quality limited parameters that require PPG Industries to sample the internal outfalls 10A and 20A and sum the results to reach a final limitation reported at Outfall A01. Therefore, the frequencies for Hexachlorobutadiene, Hexachlorobenzene, and Bromoform will be monitored at 1/week to be consistent with the frequencies established at Final Outfall A01.

Total Lead and Total Zinc - The frequencies for Total Lead and Total Zinc will be established at 1/week. This frequency is based on Best Professional Judgment.

Total Mercury - water quality limited parameters that require PPG Industries to sample the Internal Outfalls 10A and 20A and sum the results to reach a final limitation reported at Outfall A01. Therefore, the frequency for Total Mercury will be monitored at 1/week to be consistent with the frequency established at Final Outfall A01.

PARAMETER(S)	MONITORING FREQUENCY
Total Residual Chlorine	1/week
Total Nickel	1/week
Total Copper	1/week

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PARAMETER	MONITORING FREQUENCY
Total Mercury	1/week
Carbon Tetrachloride	1/week
Chloroethane	1/week
Chloroform	1/week
1,1-Dichloroethane	1/week
1,2-Dichloroethane	1/week
1,1-Dichloroethylene	1/week
1,2-trans-Dichloroethylene	1/week
Methylene Chloride	1/week
Tetrachloroethylene	1/week
1,1,1-Trichloroethane	1/week
1,1,2-Trichloroethane	1/week
Trichloroethylene	1/week
Vinyl Chloride	1/week
Phenol	1/week
Hexachlorobutadiene	1/week
Hexachlorobenzene	1/week
Bromoform	1/week
Total Lead	1/week
Total Zinc	1/week

Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2,4-Dimethylphenol, 4,6-Dinitro-o-Cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene are toxic pollutants required by guidelines, but not expected to be on-site. Therefore, a monitoring frequency of 1/year has been established based on Best Professional Judgment and is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

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PARAMETER	MONITORING FREQUENCY
Acrylonitrile	1/year
Benzene	1/year
Chlorobenzene	1/year
1,2-Dichloropropane	1/year
1,3-Dichloropropylyene	1/year
Ethylbenzene	1/year
Methyl Chloride	1/year
Toluene	1/year
2,4-Dimethylphenol	1/year
4,6-Dinitro-o-Cresol	1/year
2,4-Dinitrophenol	1/year
2-Nitrophenol	1/year
4-Nitrophenol	1/year
Acenaphthene	1/year
Acenaphthylene	1/year
Anthracene	1/year
Benzo (a) anthracene	1/year
Benzo (a) pyrene	1/year
3,4-Benzofluoranthene	1/year
Benzo(k)fluoranthene	1/year
Bis(2-ethylhexyl)phthalate	1/year
Chrysene	1/year
1,2-Dichlorobenzene	1/year
1,3-Dichlorobenzene	1/year
1,4-Dichlorobenzene	1/year
Diethyl phthalate	1/year
Dimethyl phthalate	1/year
Di-n-butyl phthalate	1/year

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PARAMETER	MONITORING FREQUENCY
Fluoranthene	1/year
Fluorene	1/year
Hexachloroethane	1/year
Naphthalene	1/year
Nitrobenzene	1/year
Phenanthrene	1/year
Pyrene	1/year
1,2,4-Trichlorobenzene	1/year

***Internal Outfall 30A** - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 MGD capacity storage tank prior to being routed to treatment).

Flow shall be monitored 1/month. This monitoring frequency has been reduced from 3/weeks to 1/month based on the infrequent nature of this discharge (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment).

PARAMETER	MONITORING FREQUENCY
Flow	1/month

PPG Industries has requested a reduction in the measurement frequency for Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene. Since this outfall no longer has the same wastewaters as the current modified NPDES permit and is expected to discharge infrequently (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment), monitoring frequencies at 3/week is no longer appropriate. Therefore, based on revised outfall waste streams and good compliance history, the measurement frequencies for Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene have been changed from 3/week to 1/month.

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PARAMETER(S)	MONITORING FREQUENCY
Carbon Tetrachloride	1/month
Chloroethane	1/month
Chloroform	1/month
1,1-Dichloroethane	1/month
1,2-Dichloroethane	1/month
1,1-Dichloroethylene	1/month
1,2-trans-Dichloroethylene	1/month
Methylene Chloride	1/month
Tetrachloroethylene	1/month
1,1,1-Trichloroethane	1/month
1,1,2-Trichloroethane	1/month
Trichloroethylene	1/month
Vinyl Chloride	1/month
Phenol	1/month
Hexachlorobutadiene	1/month
Hexachlorobenzene	1/month

Total Copper, Total Mercury, PCB-1254, Bromoform, and 1,1,2,2-Tetrachloroethane - The frequencies for Total Copper, Total Mercury, PCB-1254, Bromoform, and 1,1,2,2-Tetrachloroethane will be established at 1/quarter in accordance with the Bayou D'Inde requirements in the Upper Calcasieu Estuary, issued in the Federal Register on June 13, 2002.

TOC and Oil & Grease - the frequency was established at 1/quarter based on current stormwater guidance and BPJ.

PARAMETER(S)	MONITORING FREQUENCY
Total Copper	1/quarter
Total Mercury	1/quarter
PCB-1254	1/quarter
Bromoform	1/quarter
1,1,2,2-Tetrachloroethane	1/quarter

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PARAMETER(S)	MONITORING FREQUENCY
TOC	1/quarter
Oil & Grease	1/quarter

Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2,4-Dimethylphenol, 4,6-Dinitro-o-Cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene are toxic pollutants required by guidelines, but not expected to be on-site. Therefore, a monitoring frequency of 1/year has been established based on Best Professional Judgment and is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

PARAMETER	MONITORING FREQUENCY
Acrylonitrile	1/year
Benzene	1/year
Chlorobenzene	1/year
1,2-Dichloropropane	1/year
1,3-Dichloropropylene	1/year
Ethylbenzene	1/year
Methyl Chloride	1/year
Toluene	1/year
2,4-Dimethylphenol	1/year
4,6-Dinitro-o-Cresol	1/year
2,4-Dinitrophenol	1/year
2-Nitrophenol	1/year
4-Nitrophenol	1/year
Acenaphthene	1/year
Acenaphthylene	1/year
Anthracene	1/year

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PARAMETER(S)	MONITORING FREQUENCY
Benzo (a) anthracene	1/year
Benzo (a) pyrene	1/year
3,4-Benzofluoranthene	1/year
Benzo(k)fluoranthene	1/year
Bis(2-ethylhexyl)phthalate	1/year
Chrysene	1/year
1,2-Dichlorobenzene	1/year
1,3-Dichlorobenzene	1/year
1,4-Dichlorobenzene	1/year
Diethyl phthalate	1/year
Dimethyl phthalate	1/year
Di-n-butyl phthalate	1/year
Fluoranthene	1/year
Fluorene	1/year
Hexachloroethane	1/year
Naphthalene	1/year
Nitrobenzene	1/year
Phenanthrene	1/year
Pyrene	1/year
1,2,4-Trichlorobenzene	1/year

***Outfall 001 (ALL PHASES), Mercury Cell in Operation (Bayou D'Inde Location)** - the discharge of process wastewater from Plant A brine treatment system; once-through non-contact cooling water; cooling tower blowdown; pH control reagents; treated sanitary wastewater; non-process wastewater including blowdown from incoming water purification system, boiler blowdown, and deionization unit regeneration water; effluent from neighboring industries Certain-Teed Products Corporation and Praxair Inc.; stormwater sources including low contamination potential stormwater runoff, post first flush stormwater, and stormwater run-on from offsite; intermittent sources of firewater, deluge system wastewater, hydrostatic testing, freeze protection, condensate piping, discharge from remediation activities, overflow from Sabine settling pond, potential ground water intrusion, and wastewater from treated spent hypochlorite; sulfuric acid stripper water; evaporator area pump seal water; HCL area pump seal water; and discharges from Internal Outfalls 101, 201, and 301.

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Flow, Temperature (°F), and pH shall be monitored continuously. These monitoring frequencies were retained from the current modified permit, effective on July 1, 1991.

PARAMETER(S)	MONITORING FREQUENCY
Flow	Continuous
Temperature (°F)	Continuous
pH	Continuous

BOD₅ shall be monitored 3/week. This monitoring frequency has been established based on Best Professional Judgment and is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

PARAMETER(S)	MONITORING FREQUENCY
BOD ₅	3/week

The frequencies for Hexachlorobenzene and Hexachlorobutadiene were reduced from 3/week to 1/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

PARAMETER(S)	MONITORING FREQUENCY
Hexachlorobenzene	1/week
Hexachlorobutadiene	1/week

Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene shall be monitored 1/quarter. These monitoring frequencies were established in accordance with the Upper Calcasieu Estuary TMDL issued in the Federal Register on June 13, 2002.

Total Nickel shall also be monitored 1/quarter. This monitoring frequency was established based on Best Professional Judgment due to this the parameter being a non-TMDL water quality based effluent limitation.

PARAMETER(S)	MONITORING FREQUENCY
Total Copper	1/quarter
Total Mercury	1/quarter
Benzo(a)anthracene	1/quarter
Benzo(a)pyrene	1/quarter
Total Nickel	1/quarter

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PPG Industries has requested to add monitor and report requirements for Risk Evaluation and Corrective Action Program (RECAP) parameters at a frequency of 1/year. LAC 33:I. Chapter 13 defines "surface waters" as excluding certain on-site ditches. The definition in RECAP states; "Ditches that are part of a treatment system shall not be considered surface water provided that the treatment system is monitored downstream of an impacted area for the [constituents of concern] under the terms of an LPDES permit. Under the RECAP Program, the LDEQ Environmental Remediation Group has identified several constituents of concern. Therefore, to ensure that the PPG Canal meets the above exclusion, and to demonstrate that such potential constituents are monitored, this request was has been granted and the frequencies have been established at 1/year.

<u>PARAMETER</u>	<u>MONITORING FREQUENCY</u>
1,1,1,2-Tetrachloroethane	1/year
1,1,2-Trichloroethane	1/year
1,1-Dichloroethene	1/year
1,2-Dichloroethane	1/year
1,2-Dichloroethene	1/year
1,2-Dichloropropane	1/year
Benzene	1/year
Bromoform	1/year
1,1,2,2-Tetrachloroethane	1/year
Bis(2-chloroethyl)Ether	1/year
Bis(2-ethylhexyl)phthalate	1/year
Carbon Tetrachloride	1/year
Chlorobenzene	1/year
Chloroform	1/year
Cis-1,2- Dichloroethene	1/year
Dichloromethane	1/year
Hexachloroethane	1/year
Naphthalene	1/year
Pentachlorophenol	1/year
Phenol	1/year
Tetrachloroethene	1/year

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<u>PARAMETER(S)</u>	<u>MONITORING FREQUENCY</u>
Thallium	1/year
Trichloroethene	1/year
Vinyl Chloride	1/year

INTERNAL OUTFALLS TO OUTFALL 001 INCLUDE 101, 201, AND 301

***Internal Outfall 101 (ALL PHASES)** - the discharge of wastewater from the decommissioning of the Mercury Cell and associated activities; process wastewater from Membrane Cell portion of Plant A including HCL tank vent scrubber effluent, acid and soda ash storage areas process wastewater, and wastewater from the sulfuric acid stripper, membrane cell room floor drains, and pump seal water from evaporator or HCL area; process wastewater from Diaphragm Cell portion of Plant A including caustic process wastewater, Pels ® Waste Caustic, electrolyzers process wastewater, treated chlorinated condensate, spent sulfuric acid, hydrogen condensate, chlorine header seal water, caustic evaporator condensate, brine purges, barometric condenser purge, cell room wastewater, neutralizer effluent, waste caustic, Pels ® condensate, sulphur chloride scrubber wastewater, sulfate purge water, dissolved salt tank overflow (intermittent), chlorine tank washwater, finished brine tank overflows, start up cell liquor purge, and process area stormwater; treated asbestos bearing process wastewater from Diaphragm Cell Plants A and C; process wastewater from brine solid treatment portion of Plant A; once through non-contact cooling water from Diaphragm Cells; and low contamination potential stormwater runoff.

Flow shall be monitored continuously. This monitoring frequency was retained from the current modified permit, effective on July 1, 1991.

<u>PARAMETER(S)</u>	<u>MONITORING FREQUENCY</u>
Flow	Continuous

The frequency for TSS was reduced from 3/week to 2/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

<u>PARAMETER(S)</u>	<u>MONITORING FREQUENCY</u>
TSS	2/week

The frequencies for Total Residual Chlorine, Total Nickel, Total Copper, and Total Mercury was reduced from 3/week to 1/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit

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Monitoring Frequencies."

Total Lead - The frequency for Total Lead **will** be established at 1/week. This frequency is based on Best Professional Judgment.

PARAMETER(S)	MONITORING FREQUENCY
Total Residual Chlorine	1/week
Total Nickel	1/week
Total Copper	1/week
Total Mercury	1/week
Total Lead	1/week

Benzo(a)anthracene and Benzo(a)pyrene **shall** be monitored 1/quarter. These monitoring frequencies were established in accordance with the Upper Calcasieu Estuary TMDL issued in the Federal Register on June 13, 2002.

PARAMETER(S)	MONITORING FREQUENCY
Benzo(a)anthracene	1/quarter
Benzo(a)pyrene	1/quarter

***Internal Outfall 201** - the discharge of process wastewater and process area stormwater from the Silica manufacturing process; wet scrubber wastewater; Plant C process wastewater; non-process wastewater including groundwater intrusion water, deionization unit regeneration discharge, boiler blowdown, and steam condensate; Plant C caustic sulfate purge water; scrubbing water from process waste incinerator units; chlorinated condensate from Plant C; chlorinated condensate from Plant A electrolyzers; dissolved brine treatment solids from Plant C; low contamination potential stormwater; Plant B OCPSF process wastewater and process area stormwater; and recovered groundwater from Complex wells.

Flow shall be monitored continuously. This monitoring frequency was retained from the current modified permit, effective on July 1, 1991.

PARAMETER(S)	MONITORING FREQUENCY
Flow	Continuous

The frequency for TSS was reduced from 3/week to 2/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

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PARAMETER(S)	MONITORING FREQUENCY
TSS	2/week

Total Residual Chlorine, Total Nickel, Total Copper, Total Mercury, Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Phenol, Hexachlorobutadiene and Hexachlorobenzene are expected to be on-site. The frequencies were reduced from 3/week to 1/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

Total Lead and Total Zinc - The frequencies for Total Lead and total Zinc will be established at 1/week. This frequency is based on Best Professional Judgment.

PARAMETER(S)	MONITORING FREQUENCY
Total Residual Chlorine	1/week
Total Nickel	1/week
Total Copper	1/week
Total Mercury	1/week
Carbon Tetrachloride	1/week
Chloroethane	1/week
Chloroform	1/week
1,1-Dichloroethane	1/week
1,2-Dichloroethane	1/week
1,1-Dichloroethylene	1/week
1,2-trans-Dichloroethylene	1/week
Methylene Chloride	1/week
Tetrachloroethylene	1/week
1,1,1-Trichloroethane	1/week
1,1,2-Trichloroethane	1/week
Trichloroethylene	1/week
Vinyl Chloride	1/week

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PARAMETER(S)	MONITORING FREQUENCY
Phenol	1/week
Hexachlorobutadiene	1/week
Hexachlorobenzene	1/week
Total Lead	1/week
Total Zinc	1/week

Benzo(a)anthracene and Benzo(a)pyrene shall be monitored 1/quarter. These monitoring frequencies were established in accordance with the Upper Calcasieu Estuary TMDL issued in the Federal Register on June 13, 2002.

PARAMETER(S)	MONITORING FREQUENCY
Benzo(a)anthracene	1/quarter
Benzo(a)pyrene	1/quarter

Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2,4-Dimethylphenol, 4,6-Dinitro-o-Cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene are toxic pollutants required by guidelines, but not expected to be on-site. Therefore, a monitoring frequency of 1/year has been established based on Best Professional Judgment and is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

PARAMETER	MONITORING FREQUENCY
Acrylonitrile	1/year
Benzene	1/year
Chlorobenzene	1/year
1,2-Dichloropropane	1/year
1,3-Dichloropropylene	1/year
Ethylbenzene	1/year
Methyl Chloride	1/year

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PARAMETER(S)	MONITORING FREQUENCY
Toluene	1/year
2,4-Dimethylphenol	1/year
4,6-Dinitro-o-Cresol	1/year
2,4-Dinitrophenol	1/year
2-Nitrophenol	1/year
4-Nitrophenol	1/year
Acenaphthene	1/year
Acenaphthylene	1/year
Anthracene	1/year
3,4-Benzofluoranthene	1/year
Benzo(k)fluoranthene	1/year
Bis(2-ethylhexyl)phthalate	1/year
Chrysene	1/year
1,2-Dichlorobenzene	1/year
1,3-Dichlorobenzene	1/year
1,4-Dichlorobenzene	1/year
Diethyl phthalate	1/year
Dimethyl phthalate	1/year
Di-n-butyl phthalate	1/year
Fluoranthene	1/year
Fluorene	1/year
Hexachloroethane	1/year
Naphthalene	1/year
Nitrobenzene	1/year
Phenanthrene	1/year
Pyrene	1/year
1,2,4-Trichlorobenzene	1/year

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***Internal Outfall 301** - the discharge of post first flush stormwater (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment).

Flow shall be monitored 1/month. This monitoring frequency has been reduced from 3/weeks to 1/month based on the infrequent nature of this discharge (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment).

PPG Industries has requested a reduction in the measurement frequency for Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene. Since this outfall no longer has the same wastewaters as the current modified NPDES permit and is expected to discharge infrequently (after collection of a 25 year, 24 hour rainfall event directly to treatment or to a 2 million gpd capacity storage tank prior to being routed to treatment), monitoring frequencies at 3/week is no longer appropriate. Therefore, based on revised outfall waste streams and good compliance history, the measurement frequencies for Carbon Tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Hexachlorobenzene, and Hexachlorobutadiene have been changed from 3/week to 1/month.

PARAMETER(S)	MONITORING FREQUENCY
Flow	1/month
Carbon Tetrachloride	1/month
Chloroethane	1/month
Chloroform	1/month
1,1-Dichloroethane	1/month
1,2-Dichloroethane	1/month
1,1-Dichloroethylene	1/month
1,2-trans-Dichloroethylene	1/month
Methylene Chloride	1/month
Tetrachloroethylene	1/month
1,1,1-Trichloroethane	1/month

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PARAMETER(S)	MONITORING FREQUENCY
1,1,2-Trichloroethane	1/month
Trichloroethylene	1/month
Vinyl Chloride	1/month
Phenol	1/month
Hexachlorobutadiene	1/month
Hexachlorobenzene	1/month

Benzo(a)anthracene, Benzo(a)pyrene, Total Copper, and Total Mercury shall be monitored 1/quarter. These monitoring frequencies were established in accordance with the Upper Calcasieu Estuary TMDL issued in the Federal Register on June 13, 2002.

TOC and Oil & Grease - the frequency was established at 1/quarter based on current stormwater guidance and BPJ.

PARAMETER(S)	MONITORING FREQUENCY
Benzo(a)anthracene	1/quarter
Benzo(a)pyrene	1/quarter
Total Copper	1/quarter
Total Mercury	1/quarter
TOC	1/quarter
Oil & Grease	1/quarter

Acrylonitrile, Benzene, Chlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Toluene, 2,4-Dimethylphenol, 4,6-Dinitro-o-Cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene are toxic pollutants required by guidelines, but not expected to be on-site. Therefore, a monitoring frequency of 1/year has been established based on Best Professional Judgment and is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

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PARAMETER	MONITORING FREQUENCY
Acrylonitrile	1/year
Benzene	1/year
Chlorobenzene	1/year
1,2-Dichloropropane	1/year
1,3-Dichloropropylyene	1/year
Ethylbenzene	1/year
Methyl Chloride	1/year
Toluene	1/year
2,4-Dimethylphenol	1/year
4,6-Dinitro-o-Cresol	1/year
2,4-Dinitrophenol	1/year
2-Nitrophenol	1/year
4-Nitrophenol	1/year
Acenaphthene	1/year
Acenaphthylene	1/year
Anthracene	1/year
3,4-Benzofluoranthene	1/year
Benzo(k)fluoranthene	1/year
Bis(2-ethylhexyl)phthalate	1/year
Chrysene	1/year
1,2-Dichlorobenzene	1/year
1,3-Dichlorobenzene	1/year
1,4-Dichlorobenzene	1/year
Diethyl phthalate	1/year
Dimethyl phthalate	1/year
Di-n-butyl phthalate	1/year
Fluoranthene	1/year
Fluorene	1/year

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PARAMETER(S)	MONITORING FREQUENCY
Hexachloroethane	1/year
Naphthalene	1/year
Nitrobenzene	1/year
Phenanthrene	1/year
Pyrene	1/year
1,2,4-Trichlorobenzene	1/year

2. Outfalls 002 and 004 - Stormwater and Utility Wastewaters

***Outfall 002** - the discharge of stormwater runoff from Plant A; steam condensate from Diaphragm Cell Chlor/Alkali production (Plant A); once through non-contact cooling water from Plant A; treated bilge water from barge transport vehicle; potential groundwater intrusion; and intermittent discharges of firewater and from condensate piping.

Utility wastewater pollutants being discharged to discrete outfalls shall receive monitoring frequencies according to the following schedule:

Flow and pH shall be monitored 3/week. These monitoring frequencies have been reduced from 1/day to 3/week in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies."

TOC and Oil & Grease shall be monitored 3/week. These monitoring frequencies have been established based on Best Professional Judgment.

PARAMETER	MONITORING FREQUENCY
Flow	3/week
pH	3/week
TOC	3/week
Oil & Grease	3/week

Total Copper, Total Mercury, Benzo(a) anthracene, and Benzo(a) pyrene shall be monitored 1/quarter. These monitoring frequencies were established in accordance with the Upper Calcasieu Estuary TMDL issued in the Federal Register on June 13, 2002.

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PARAMETER(S)	MONITORING FREQUENCY
Total Copper	1/quarter
Total Mercury	1/quarter
Benzo(a) anthracene	1/quarter
Benzo(a) pyrene	1/quarter

***Outfall 004** - the discharge of once through non-contact cooling water from Plant A chlorine/caustic facility; wash down from car including car wash; cooling tower blowdown; intermittent discharges from condensate piping and acid tank scrubber discharge; and storm water runoff from caustic storage, chlorine liquefaction, and brine treatment areas.

Utility wastewater pollutants being discharged to discrete outfalls shall receive monitoring frequencies according to the following schedule:

Flow and pH shall be monitored continuously. This monitoring frequency was retained from the current modified permit, effective on July 1, 1991.

PARAMETER(S)	MONITORING FREQUENCY
Flow	Continuous
pH	Continuous

TSS, TOC, and Oil & Grease shall be monitored 1/week. These monitoring frequencies have been established based on Best Professional Judgment

PARAMETER(S)	MONITORING FREQUENCY
TSS	1/week
TOC	1/week
Oil & Grease	1/week

Total Copper, Total Mercury, Total Nickel, Total Zinc, Total Calcium, 1,2-Dichloroethane, Phenol, 2-Methylnaphthalene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Pyrene, and Phenanthrene based on the requirements of the Upper Calcasieu Estuary TMDL for Bayou Verdine issued in the Federal Register on June 13, 2002. Monitoring Frequencies have been established at 1/quarter in accordance with the TMDL.

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PARAMETER(S)	MONITORING FREQUENCY
Total Copper	1/quarter
Total Mercury	1/quarter
Total Nickel	1/quarter
Total Zinc	1/quarter
Total Calcium	1/quarter
1,2-Dichloroethane	1/quarter
Phenol	1/quarter
2-Methylnaphthalene	1/quarter
Anthracene	1/quarter
Benzo(a)anthracene	1/quarter
Benzo(a)pyrene	1/quarter
Chrysene	1/quarter
Dibenzo(a,h)anthracene	1/quarter
Fluoranthene	1/quarter
Pyrene	1/quarter
Phenanthrene	1/quarter

X Compliance History/DMR Review

A compliance history/DMR review was completed covering the period of January 2004 through August 2006. The following excursions were reported by PPG Industries:

DATE	PARAMETER	OUTFALL	REPORTED VALUE		PERMIT LIMITS	
			MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
1/31/04	Hexachlorobenzene	501(*)	0.00015 lbs/day	0.00194 lbs/day	0.00010 lbs/day	0.00034 lbs/day
1/31/04	Hexachlorobenzene	501(*)	0.007 µg/L	0.09 µg/L	0.006 µg/L	0.022 µg/L
12/31/04	Total Mercury	101	---	0.78 lbs/day	---	0.30 lbs/day
5/31/05	Total Nickel	201	---	44.6 lbs/day	---	26.8 lbs/day
8/31/05	Hexachlorobenzene	501(*)	0.01607 lbs/day	0.22497 lbs/day	0.00010 lbs/day	0.00034 lbs/day

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DATE	PARAMETER	OUTFALL	REPORTED VALUE		PERMIT LIMITS	
			MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
8/31/05	Hexachlorobenzene	501(*)	0.0105 µg/L	0.14650 µg/L	0.006 µg/L	0.022 µg/L
6/30/06	pH	002	----	9.0	---	11.9
8/11/06	Bromoform	001	---	48 µg/L	---	56.8 µg/L

(*) Outfall 501 has been deleted from the proposed permit.

Inspections

October 25, 2005 - Inspection conducted after Hurricane Rita. All units, except for the Mercury Cell are running at normal capacity. The Mercury Cell cooling tower in need of repair. Repairs expected to be completed in early November 2005.

December 10, 2004 - A compliance evaluation inspection (CEI) was conducted on this date. The Mercury excursion from December 2004 occurred 4 days prior to the CEI and was a topic of discussion.

XI "IT" Questions - Applicant's Responses

IT Questions and PPG Industries' responses can be found in Appendix D of the April 2004 application and the expanded version can be found in Addendum two, dated February 10, 2006.

XII Endangered Species:

The receiving waterbody, Subsegments 030306, 030901, and 030301 of the Calcasieu River Basin are not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated September 29, 2006 from Watson (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

XIII Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XIV Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to permit the discharges described in the application.

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XV Variances:

No requests for variances have been received by this Office.

XVI Public Notices:

Upon publication of the public notice, a public comment period shall **begin** on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be **raised** in the hearing.

Public notice published in:

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